PBS Wildcat!

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WILDCAT! version 3 is the latest generation of what we consider the most powerful Bulletin Board System available today. If you're new to Bulletin Board Systems, we hope you find *WILDCAT!* easy to setup, use and maintain. If you're upgrading from a previous version of *WILDCAT!*, you're going to find this version rich with new features. State of the art maintenance routines to make your System Operator duties easier than ever before.

This version is a complete rewrite incorporating more than 5 years of telecommunications experience. We truly believe *WILDCAT!* version 3 brings the bulletin board industry current with today's technology. Your callers will find *WILDCAT!* powerful, yet intuitive. As a Sysop you'll discover new routines to make maintenance a breeze, and more than ever, just plain fun to use!

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Support via CompuServe and our own multiline BBS is a data call away 24 hours a day. Voice support is available during business hours, Monday through Friday. See the section on technical support for details. Many thanks to the hundreds of Sysops who gave us suggestions for this release. But more importantly, THANK YOU for buying the product and encouraging us to create a Bulletin Board package we all only dreamed about.

Enjoy version 3!

Warmest Regards,
MUSTANG SOFTWARE, INC.

Jim Harrer
President/CEO

The Professional Bulletin Board System

Wildcat! BBS

(4/1/94 printing)

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Credits

Our special thanks go out to everyone who participated in the development of *WILDCAT!* Version 3. We could not have met our goals without the help of our alpha test team, beta test team, copy editors and all the sysops who called in during the test phase.

Our sincerest thanks to everyone who had a hand in making *WILDCAT!* v. 3 a success. We appreciate your efforts.

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Chapter 1
Introduction

"WILDCAT! 3 shows true innovation and excellence — with a great deal of vision. Well done!"

Dr. File Finder
Michael E. Callahan

In this Chapter...

- How to use this manual
  Where to go first & how to use it as a reference guide
- What is *WILDCAT!*
  Explore the Power, Speed and Flexibility
  A brief history
- Security
  Why security is of paramount importance in *WILDCAT!*

How To Use This Manual

This documentation is organized for use as an initial setup guide, and as a reference book. Background information on *WILDCAT!* is presented first (chapters 1 and 2), followed by step-by-step installation instructions (chapters 3, 4 and 5), followed by operational and customization reference material.

Unless you are intimately familiar with *WILDCAT!* you should begin with chapter 1 and follow the instructions through chapter 5. After completing the setup material, a full reading of the operational reference is strongly recommended. *WILDCAT!* is a very versatile and configurable program. There is no substitute for reading the operational reference to become familiar with the numerous features available.

After you have established an operational *WILDCAT!* BBS System, the manual will serve as a reference guide. It is indexed extensively. After completing the initial setup you should be able to easily locate material on any topic by checking the Table of Contents or the Index.

Don't overlook the sections devoted to *Technical Support, WILDCAT! Conference Structure* and *Features in Depth.*

What Is *WILDCAT!*

At first glance, *WILDCAT!* may look like just another bulletin board program. This was by design. Much effort was spent incorporating popular features of other BBS systems, including many of the command options. That is where any similarity ends, however. Powerful extended features have been added to what at first appear to be familiar routines. Other features and refinements are unique to *WILDCAT!*, and are found in no other BBS environment.

In addition to drawing on its own creativity, Mustang Software solicited input from thousands of BBS system operators (sysops) from across the country to determine the required features for a professional bulletin board system. Features include:

- Fast B-Tree **indexed access** to all data files including Users, Files and Messages
- **Easy setup** via an interactive installation program which configures defaults
- **Dynamically built menus** based on security profile definitions in the configuration file
- **Separate color-coded menus for each conference**, with variations for different security profiles

- **RIP (Remote Imaging Protocol) graphics support**, allowing full mouse control for the remote user, with icons and full screen graphics.
- **Flexible security** provisions with 1,000 profiles available
- Date of birth and phone available as **security check items**
- **Include/exclude 300, 1200 & 2400 baud** calls during definable time periods based on sysop preference and system needs
- Supports locked DTE rates up to **57,600 bps**, allowing ultra-fast data transfer over normal phone lines
- More than 100 **customizable display files** with embedded code support for placement of any available system or user information in displays and menus
- Message features include a **full-screen editor with reply, quoting, forwarding, carbon copies, return receipts, file attachments and printing options**
- **1,000 message conferences** available, each of which may draw from a pool of **1,000 file areas**
- **Deleted messages saved** until purged on a conference basis by the sysop
- **ANSI graphics** support in menus, file descriptions, messages and system prompts; auto-detected at logon
- **File descriptions** may be viewed as a **single-line** item, a **2-line** item, or may include the **entire text of an attached message** for each file
- Downloads can be **marked while viewing file lists**, and the time indicated in each file description is **based on the caller's baud rate.**
- **Automatic caller notification of bulletin updates** based on bulletin file date and time
- **Multiple questionnaire** files available in each conference, including one for new users and others selected by menu choice
- The MAKEQUES.EXE **full-screen questionnaire editing** program creates branching questionnaires with freeform or formatted output. Questionnaire results can be used to update caller records
- Questionnaire is pre-formatted to accept dates, **SS #, Visa/MC, AMEX**, text strings, multiple choice, required answer and Yes/No responses with branching
- **Remote event timer** supports up to 65,535 separate external events outside of the *WILDCAT!* system
- **Configurable screen pauses** based on each callers screen length.
- System and Menu **help files** available, both in normal and ANSI color

- **Fast Login** system to proceed directly to the Main Menu, bypassing front-end screens
- Most sysop functions available from **remote sysop logon**, including system update and maintenance
- **Internal** upload and download support, including **multiple file transfers** using XMODEM, 1K-XMODEM, YMODEM, ZMODEM, KERMIT, YMODEM-G, 1K-XMODEM-G and ASCII
- **Doors** allow users to run on-line programs, games, etc.
- **Hot Key** entry of single-character caller selections
- Enhanced **Drop to DOS** capabilities and return
- **Closed and subscription system option** configurable with special questionnaire, forced comment or immediate log off
- **Birthday message** display file sent on user's birthday
- Ability to **View a compressed file** contents from any file prompt
- Support for up to 2 billion users and files, and 65,535 messages per conference
- Full **control of other nodes** even from a remote dial-in connection
- Easy on-line maintenance with multiple **relational database links** between messages, files and users

What About Security?

Much of WILDCAT!'s architecture and design revolves around the issue of creating a secure BBS environment. Although *WILDCAT!* is perfectly capable of serving the needs of hobbyist telecommunications enthusiasts, it was designed with a business environment in mind, an environment in which the integrity of information is of paramount importance. *WILDCAT!*'s security is second to none. **Since its first release in 1986 the security provisions have never been overcome as the result of a software deficiency or compromise of the program code.** The file database structure allows sensitive non-BBS data to reside on the same hard disk as the *WILDCAT!* system, since ONLY the specifically authorized database files are ever allowed access. The system operator has full control of the security setup from the number of login checks performed to file and message access to the time remaining prior to logoff.

Should you have any concerns or discover what you believe are problems with a security issue, please contact Mustang Software Management Staff for an immediate response.

Databases and Conferences

In order to properly plan and install a BBS that meets your personal needs, you need to fully understand how conferences and databases within *WILDCAT!* operate. This is a very important issue, and your mastery of the concepts explained here will have a significant effect on how your BBS successfully accomplishes its goals.

Conferences

Within a *WILDCAT!* BBS, a conference is defined as a separate section containing its own set of messages, and *optionally* its own menus, bulletins, questionnaires and files for download. Notice that the only mandatory item that MUST be different in each conference is the message database. There will be more on database specifics shortly, but for now try to grasp that messages in each conferences are physically stored separately from every other conference.

In addition to having a separate message section, each conference may have files available for download. The listings of files available in any particular conference consist of as many file areas as desired, drawn from a pool of 1,000 file areas. A single file area is nothing more than a subdirectory on disk, usually containing files related in some manner.

Conferences and security profiles can be configured to offer many different types of BBS structures. The following are just a few examples.

A Public BBS

In this example the sysop wants to have all callers visit different conferences to discuss different subjects, but allows almost all callers access to all conference areas. One conference might be called "Skiing," another "Photography," and another "For Sale." The files available in each conference might be the same, however, with all file areas available for listing and download in each conference. This is an example of a BBS with separate message conferences, all referencing identical file areas. The Menus, Bulletins, and even Questionnaires would also probably be the same in each conference on this type of system.

A Leased BBS

Another type of BBS may require totally separate "conferences" where each is devoted to a unique, private entity. In this type of BBS, most users have access to *only* one conference. For example, a BBS may actually rent-out conference space to several companies. The customers or employees of those companies do not want to know anything about the others, in fact the sysop doesn't want them to know that other conferences exist, much less be aware of who rents out additional conferences. In this case each conference will probably have separate Menus identifying the company logo, separate Bulletins, separate Questionnaires, and even distinct file downloading areas not accessible by the others. Callers are locked into a single conference (or perhaps several) by virtue of their security profile, limiting access to specific conferences.

A Hybrid BBS

A third example BBS might combine some features from both open and leased BBS systems. This BBS would have conferences for different discussion topics (like the Open BBS example), but make the menus for each topic different, perhaps to reflect the conference topic. Each conference may have its own Bulletins and Questionnaires, but share other Display files. In addition, file listings in each conference may be limited to files directly related to the conference topic. In this scenario, most BBS callers would probably have access to most conferences.

As you can see, the conference structure allows a great deal of flexibility to meet various needs.

Databases in *WILDCAT!*

WILDCAT! uses several internal database systems to keep track of three major groups of system information: USERS, FILES and MESSAGES. A single database tracks all users on the BBS and a single file database tracks all files available for download. There may be up to 1,000 message databases, one for each conference established. Each database is independent, and database changes are usually made from within the program. Each separate database consists of a data file (.DAT) as well as an index file (.IX) to speed up searches, and possibly a dialog file (.DIA) which is only present in multi-user environments or if the redundant safety mechanism is activated during configuration. All database files are composed of records, which can be thought of as index cards containing information about any ONE User, File or Message. When a *WILDCAT!* system is first started, all database files are empty. Database entries can be made in a number of ways, which are discussed below under the appropriate database type.

The USER database is just what it sounds like: a file containing records for each and every user on the system. There is only one User database. The first record added will most often be the system operator's name, a process that is more fully described later in this manual. Other user database entries are usually made automatically as new users call the system, but names may be added manually by the sysop. As users are added the database expands, and as they are deleted, the space is made available for new users.

The FILE database may be a new concept to even experienced BBS sysops. Although many BBS programs track the lists of files available on the system as text listings, *WILDCAT!* uses the database method. File organization in this manner has many advantages, not the least of which is additional security and flexibility. No file on your computer system may be accessed through *WILDCAT!* unless it is first listed in the file database.

Each record in the file database contains the file name, size, date added to the system, file area designator (which tells where the file is physically located on the disk), file keywords, description, and other information. Since the file database is empty on a new *WILDCAT!* system, file records must be added either manually by the sysop or by using our file addition utility, *wcFILE* or the PRO! Series. *wcFILE* reads a standard text file listing used by a number of BBS programs or the DIR command, and places the information into the *WILDCAT!* file database. The PRO! Series for *WILDCAT!* also manipulates the file database. See *Chapter 9—WILDCAT! Support Programs* for details about *wcFILE*.

Changes made to the file database cause the appropriate changes to be made on disk, if indicated. For example, changing the file name will cause DOS to actually rename the file on disk, and deleting a database entry optionally allows deletion of the file on disk also. A change of the file area designator will cause the file to be copied to the new drive & subdirectory and then deleted from the old one.

Each Conference creates its own Message database, in a shared directory or in its own directory. Message management is controlled by *WILDCAT!* and makes use of deleted message space for new messages as they are entered. The user need not be concerned with the actual operation of the message databases, since it is fully transparent in function.

Chapter 2
System Requirements & Technical Support

"The writer does the most who gives the reader the most knowledge and takes from him the least time."

(unknown)

In this Chapter...

- System Requirements
  What you need to get started and equipment checklist.
- Registering your program
  What is included with your registration.
- Technical Support
  We're only a phone call away.

System Requirements

WILDCAT! was written on the premise of being used in business applications. No attempt has been made to make the product compatible with single or dual floppy drives and computers with limited memory capacity. It is necessary that your memory and storage areas are capable of accommodating the many files and work areas that are required by the code during normal run-time. The following list represents the minimum configuration your system should have to properly maximize the potential of the program.

- IBM Personal Computer (or true compatible)
- PC-DOS or MS-DOS, Ver. 3.3 or later
  (other operating environments such as DESQview may be used, see Chapter 8 — Multiline Operation for details)
- Asynchronous communications (serial port) adapter
- RS-232 cable with the standard 9 pins connected (some modem cables do *not* have all the pins hooked-up)
- Intelligent AT command set modem
- 80 column monochrome or color monitor
- Voice-grade telephone connection for modem
- 384K (minimum) RAM, 300K for *WILDCAT!*
- Hard disk drive

Microsoft Windows, OS/2 and other operating platforms

WILDCAT! is not a Windows or OS/2 Application. Some sysops have successfully run *WILDCAT!* under Windows or OS/2, however due to the various ways Windows and OS/2 can be mis-configured, we do not support or recommend running *WILDCAT!* in these environments. This is especially true for multiline operation. Windows .PIF files and OS/2 setup information files are available on our support BBS, but operation and configuration is the responsibility of the sysop.

Technical Support Services

Mustang Software, Inc. strongly believes in providing quality software at a reasonable price. We back our products with technical assistance when it is needed by registered users. *Please* send in your registration card to enroll in our technical support plan.

Benefits of Sending Your Registration

- *Free technical support by phone Monday through Friday between 9 a.m. and 5 p.m. Pacific time*
- *Automatic notification of major program updates*
- *Additional program updates at a reduced rate*
- *24-hour access to the private multiline Registered User's HQ BBS at Mustang Software*
- *BBS access to download proprietary utility programs written by Mustang Software, Inc. and other authors, which enhance and add features*

Technical Support

Satisfied customers are our greatest asset. Please fill out and mail your registration card as soon as you purchase *WILDCAT!*, and we'll enroll you in our telephone technical support program.

Until your registration information is received, technical support is NOT available via our BBS or by phone from our technical staff.

WILDCAT! is designed for ease of use, and this manual should contain the answers to most of your questions. Read it first. Make use of the F1 help key in MAKEWILD, and check the appendices for troubleshooting procedures. If you're still stumped, technical support is only a phone call away. You may first want to call our own *WILDCAT!* system reserved for Registered Users at 805-873-2400 for valuable insight by other sysops. You will *not* have full access on your first call since we need you to fill out the user database information such as your password, etc. Your security access will be raised as soon as possible, usually within 24—48 hours, providing your registration information is on file. This method of obtaining support is especially useful if you want expert guidance regarding the more advanced features.

Another alternative is CompuServe where we sponsor a part of the PC Vendor Support Forum. You reach us by typing **GO PCVENA** at any CIS prompt and then selecting Subtopic 9.

If you are still unable to find the answer to a question or just need a quick explanation, please give us a voice call M-F between 9 a.m. and 5 p.m. PST.

When calling for support please:

- Have your registration number handy.

  *Record your Registration number here*_____

- Be at your computer with the BBS phone line clear and your manual handy. A call to your system for testing is often needed to resolve problems.
- Be ready to describe the problem in detail.
- If possible, be ready to duplicate the problem on your system.
- Please be ready to refer to your DOS manual for questions regarding DOS. A working knowledge of DOS is absolutely necessary.
- **You can call technical support direct at (805) 873-2550.**

WILDCAT! is constantly undergoing enhancements and revisions.

This is normal software maintenance. The current version of *WILDCAT!* may be a major or minor release. We can provide the best support to users who are running the current major release, and encourage you to keep your software updated. The cost is minimal and the benefits are great.

Chapter 3
Installation

"If your work product speaks for itself—don't interrupt."

Rick Heming. VP Operations
Mustang Software, Inc.

In this Chapter...

- *WILDCAT!* Installation
  New systems, upgrades and multiline conversions
- Quick Start
  For veteran sysops who want to jump right into *WILDCAT!*
- Creating a *WILDCAT!* environment
  The preliminaries: subdirectories and a CONFIG.SYS file for your system
- MAKEWILD
  WILDCAT!'s interactive installation program
  Step-by-step instructions

Installation

WILDCAT! installation has been simplified through an interactive installation program. It may be used for a completely new *WILDCAT!* installation, or to upgrade from any prior release. Please read through the following instructions regardless of which type of installation you are performing.

New users start here

First, BACKUP your entire system! Do not perform this installation without making a complete backup of everything on your hard disk(s). If you have not been making regular backups, consult your DOS manual for instructions, or obtain third-party backup software for this purpose. This procedure is recommended in the unlikely event something goes wrong with the installation.

Follow the instructions for the WINSTALL program on the following page. Install ALL files. Skip to the WINSTALL PROGRAM section now.

Users upgrading from any prior version start here

First, BACKUP your entire system! Do not attempt to upgrade without making a complete backup of everything on your hard disk(s). If you have not been making regular backups, consult your DOS manual for instructions, or obtain other backup software for this purpose. This procedure is recommended in the unlikely event something goes wrong with the installation.

If you are upgrading from any earlier version of *WILDCAT!* or from another BBS program, this version MUST be installed as a new product in a new directory as your first step. The conversion of your old database files, and movement of your display files and other items can be done after completing a new installation. This method allows much more control over file conversions and updates, and will make your upgrade as painless as possible.

Follow the instructions for the WINSTALL program on the following page, and then review the step-by-step checklist for conversion and upgrade that follows the install program in this chapter.

Users upgrading from a prior registered version may not sell or otherwise transfer rights or ownership of a previous registered program.

See the License Agreement, or call Mustang Software if you have any questions in this regard.

The WINSTALL Program

Begin the installation program WINSTALL by placing the diskette labeled **INSTALL DISK** in drive A: (or any other drive). Make drive A: (or whatever drive you are using) the current drive and type WINSTALL to begin the installation program.

When the program starts you are prompted to confirm the drive location for the installation files (on your distribution disks). Enter the correct drive letter as desired. You may perform the installation from any disk, including your hard disk, as long as all files from all distribution disks are present.

The first installation screen controls which subdirectories are used for the files as they are installed on your hard disk. There are six choices, one each for the Home directory, questionnaire files, display files, menu files, help files and bulletin files.

```
Wildcat v3.90                    Required  Disk Space        4,869,568
Installation Utility             Available Disk Space      114,655,232

WILDCAT! home directory:         C:\WC30
Questionnaire directory:         C:\WC30\QUES
Display file directory:          C:\WC30\DISP
Menu file directory:             C:\WC30\MENU
Help file directory:             C:\WC30\HELP
Bulletin directory:              C:\WC30\BULL
Install options:                 Install All Directories

Start installation

The home directory is where the WILDCAT! program files are located.
It is usually located directly below the root directory.
```

Note that a change to the drive or main subdirectory path for the first choice results in a corresponding change to all other path defaults.

***WILDCAT!* Home Directory**—This path is the location of all the executable files WILDCAT.EXE, WILDCAT.OVR, and many others. It also is the starting point for most BBS activity. This directory must be a part of your path statement for

proper operation. For details of setting your search path see your DOS manual. **If you are installing this release as an upgrade to a prior release, you must use a home directory name that is different than your old version!**

Display File Directory—This path is the location of all files displayed to the caller with exception of the specific ones listed below. It is usually created as a subdirectory of the *WILDCAT!* Home Directory for convenience. The default for each of these directories is recommended for initial installation and can be changed easily later during additional configuration.

Menu File Directory—This path contains the text and color-coded menu files for display to the caller.

Help File Directory—This path contains the text help files for display to the caller.

Bulletin Directory—This path contains the bulletin menu and all bulletin files for display to the caller.

Install Options—By default this option indicates "Install All Directories," meaning that all files will be installed as indicated. Selecting this item and pressing [ENTER] allows limiting the installation process through a pop-up window.

The final choice on the installation program menu allows you to specify which items you want to install.

Each item displayed in the window can be set to Yes or No by highlighting the line and pressing [ENTER].

***WILDCAT!* program files** include the actual WILDCAT.EXE and .OVR. Unless you have already installed this release once and have the program file this selection should be set to Yes.

Questionnaire files include the sample questionnaire menu and a questionnaire for new users. It does not include the program for questionnaire creation MAKEQUES.EXE which is a part of the Utility files. Unless you have already installed this release once and have the program file this selection should be set to Yes.

Display files include all text displays sent to the caller.

There are many display files, and they should be customized to reflect your personal taste and system needs. Even if you already have an older version installed, you may want to install these files to have examples of the new files.

Menu files include all sample menus in three access levels.

Even if you already have an older version installed, you may want to install these files to have examples of the new files. These sample menus make use of the new @ color codes for *WILDCAT!*.

Help files include all text files containing instructions for operating *WILDCAT!* features and menu choices.

Bulletin files include a sample bulletin and a menu file.

Utility files include all other executable files: MAKEWILD.EXE, WCREPAIR.EXE, MAKEQUES.EXE, MKWCTXT.EXE, WUPGRADE.EXE, WCMODEM.EXE, WCFILE.EXE, WCRENUM.EXE and several others.

Modem related files include all modem NRAM initialization files (*.RAM) and all modem configuration files for *WILDCAT!* (*.MDM).

Batch file examples includes examples of CATx.BAT, MAIL.BAT, and other example batch files to operate *WILDCAT!* and its support programs.

Sample configuration includes default conference, file and security profile assignments. These samples are referenced in the documentation and can be changed during your configuration. The default of Y is suggested unless you are upgrading from a prior version.

***Tomcat* and TNet** includes executable files for both programs, and a configuration utility for *Tomcat.*

RIP support files includes a sample of RIP (Remote Imaging Protocol) graphical menus and display files, along with the RIP versions of *WILDCAT!* and *Tomcat* prompt files.

The final menu choice in WINSTALL is **Start Installation** which actually begins the process of un-compressing the requested files from disk. When it is complete the program will terminate and leave you at a DOS prompt.

Note: Be sure to read the contents of the READ.ME file that may be contained on the **INSTALL DISK**. The installation program will ask you if you want to read it, and you should be sure to do so. It will contain important update information to this documentation if it exists. Documentation updates included in the READ.ME file are important!

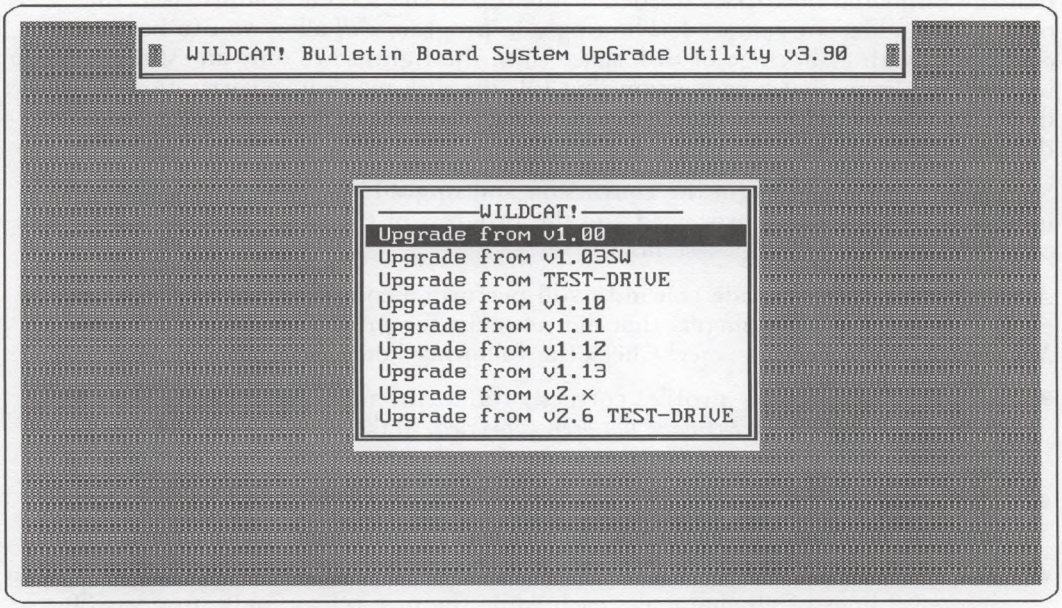
If you are upgrading from a prior release you should continue with the next section. If this is a first time installation you can skip ahead to Quick Start, located immediately following the upgrade program, or you can read over the next section for background information if desired.

The UPGRADE Program

If you are upgrading from a previous version of *WILDCAT!*, you can convert most of your existing system information, including users, files, messages and some configuration data.

The program WUPGRADE.EXE is designed to convert as much information as possible. After completing the installation program, change to your new *WILDCAT!* home directory (by default C:\WC30) and run the upgrade program WUPGRADE.EXE.

The main screen prompts you to select which type of upgrade is being performed. If you have used a previous release of *WILDCAT!* you should move the highlight bar using the arrow keys and highlight the appropriate version in the top portion of the window. Make certain you select the correct release since the data structures are very different from version to version.



When the correct program is highlighted press ENTER to advance to the configuration screen. For each type of upgrade this screen is slightly different, and requests different information.

WILDCAT! v1.03SW
WILDCAT! Test-Drive -
WILDCAT! v1.10 -
WILDCAT! v1.11 -
WILDCAT! v1.12 -
WILDCAT! v1.13 -
WILDCAT! v2.x -

The upgrade instructions from all prior version of *WILDCAT!* follow those for v2.x listed below.

WILDCAT! v2.6 Test Drive - This upgrade and those above require you enter the path for 4 system items. All four paths must be entered, even if you are upgrading only a portion of your files. The CONFIGWC.BBS file contains your entire system parameter information and is usually located in the *WILDCAT!* home directory. The USERFILE.DAT file contains your user database and is usually located in your datafile path along with FILESPEC.DAT and MSGFILE.DAT. The path to each of these items must be correct or the program will not accept your input.

After entering the path information you have the option of limiting the conversion process by highlighting and selecting the *Convert options* selection. The default is *All possible databases*, and unless changed will result in conversion of all items. The pop-up window lets you toggle the individual conversion items *Yes* or *No* as desired. Note that the estimated disk space needed at the top of the screen is adjusted as the options are added or removed. The upgrade program *will* allow you to begin a conversion with a shortage of disk space since the figures are only an estimate. Keep in mind however, that a conversion that fills the disk may cause corruption of your data files. When ready to return to the configuration screen, press [ESC] to remove the pop-up window.

Select *Start upgrade* to begin the conversion and upgrade process. A graph display indicates the area being processed and the progress of the upgrade, which may take considerable time on large systems.

After finishing the upgrade you must still perform a complete system check and enter configuration parameters that did not exist for prior versions. *Check every MAKEWILD setting for accuracy!* Check the following items especially:

- Although the security profiles correctly reflect the menu access level for users, *the menu definition screens have not been converted.* Make certain that the access levels for each menu item correctly match your old system.
- As part of the conversion, all users are given access to all nodes in a multiline environment and adjustments should be made if needed.
- The file database conversion truncates the short description since the old version allowed 2 lines of 40 characters each while the new release only supports 60 characters total. This only affects old descriptions that filled the entire second line.
- Your *WILDCAT!* registration number is not automatically placed in MAKEWILD. It was previously stored in the executable file.

- External protocols Kermit and Zmodem are internal and the use of K and Z for external assignment letters is not allowed.
- All 26 message folders are converted to the first 26 conferences, numbered from 0—25. Unless you delete messages in conference 24 and 25, be careful which users are given access since they contain your old wastebasket messages and comments to the sysop respectively.
- Events are not converted, and need to be rescheduled using the new event management system.

Important Notes for Sysops Upgrading from Prior Versions

This section reviews the operational and structural differences between Version 3 and the 2.xx series. It is included to explain the reasons for many of the changes, and to help make the changeover as smooth a process as possible. Specific feature changes will not be reviewed unless they impact implementation or system design.

The discussion from this point to the end of the chapter assumes knowledge of a prior WILDCAT! release. It touches on some issues that may not be immediately understood. You are encouraged to make note of the information in this section, and explore the changes needed to make your system operate to its fullest under Version 3.

Upgrading to WILDCAT! from another BBS program

The program WCONVERT.ZIP, available by download from the MSI HQ BBS, will convert and update your current BBS software to *WILDCAT!* BBS. PCBoard version 14.5 and higher, and recent versions of GAP BBS can be converted almost completely, saving your users, messages, and files. Some display file conversions are also supported for PCBoard display files. Other types of BBS software user files, message files, and file listings can be converted as well, using the "Generic conversion" option.

For more information, and complete instructions, download WCONVERT.ZIP from the MSI HQ BBS.

Changes Affecting Both Single & Multiline

Home and Work Directories

WILDCAT! Version 3 operates from a single HOME directory (C:\WC30) where MAKEWILD is run to create its set of configuration files. CONFIGWC.BBS has been replaced by several other files containing various aspects of the configuration.

The **HOME** directory is also the default location for the batch files DROPDOS.BAT, MAIL.BAT, VIEWCOMP.BAT, all protocol XXXXUP.BAT and XXXXDN.BAT files and DOOR#.BAT. In addition, two new batch files are also located in the HOME directory. POSTCALL.BAT runs a batch process after every call, and is fully explained in *Features in Depth - Events*. Another new batch file, SCANFILE.BAT for virus scanning of new uploads, is explained in *Features in Depth - Virus Scanning*.

A new **NODE WORK** directory is automatically created below the HOME directory for each node on the system. This work directory (C:\WC30\WCWORK) provides a static location for individual work directories for each node on the system. For node 1, even in a single-line system, a directory path is created named C:\WC30\WCWORK\NODE1, and similar names for each active node. The work directory is used for all temporary processing done by the node.

Modem Configuration

In order to simplify our interface with a ever-increasing variety of modems we have altered our entire approach in this area.

Since the vast majority of new modems today make use of nonvolatile RAM (NRAM) to store modem settings, there is little reason to send initialization strings on startup and reinitialization strings after each call in most cases. We continue to allow an initialization string for modems requiring this option, but discourage its use for any modem with NRAM.

We have added a special program, **WCMODEM.EXE**, which is specifically designed to configure your modem NRAM and perform diagnostic testing. See the *wcMODEM* documentation in the section *WILDCAT! Support Programs* for more information on properly setting your modem.

As mentioned previously, **we have abandoned the numeric result codes in favor of verbal codes** in all areas. *WILDCAT!* can now handle multiple result strings since it determines baud rate separately from whether the connection makes use of hardware error correction. You should pay special attention to the modem setup section of MAKEWILD and read the documentation for subtle differences. These changes allow total configuration of any modem for all baud rates and verbal result code strings.

The old .MDM configuration files *cannot be read* by the new *WILDCAT!* and need to be re-created using the recommended procedures.

Shelling to DOS vs. Terminating *WILDCAT!*

Prior to the *WILDCAT!* Version 3, most external batch processes except for external protocols were executed by setting an errorlevel and terminating. It was then the responsibility of a properly designed CAT.BAT file to test for various errorlevels and pass control to the appropriate batch file. **The errorlevel method of passing control has been completely eliminated**. The only errorlevel test necessary in a CAT.BAT file is for errorlevel 1 to see if an error occurred.

The recommended method of operation for *all* batch processes (doors, DOS hooks, etc.) is to **shell** to a second copy of COMMAND.COM to run the desired program. This option can be used on almost *any* system when combined with the swap to disk or EMS option, and leaves all memory available to the application except for about 3.5K. The *big advantage* in using this method is no sysop intervention is required for batch processes since *WILDCAT!* executes the batch file directly and automatically returns to the exact point in the BBS where it left. No recall of CAT.BAT is even necessary in the batch file.

The old method of termination for batch process is still supported, but requires proper commands in CAT.BAT to test for each batch possible. The documentation for each batch process discusses **shelling vs. termination** in detail.

Using the new shell process is easy, and is fully explained in the discussion of each feature that makes use of it (Doors, MAIL.BAT, DOS Hooks, etc.).

Net & Echomail

New procedures for integrating netmail and various echomail networks have been implemented. Review the section on Netmail in *Features in Depth* for details. It is important to note that *WILDCAT!* **no longer performs an errorlevel 60 after each call** to return to a front-end mailer, but *automatically exits to DOS* after a call if it was started with the /B command line switch. The new POSTCALL.BAT file is not designed for front-end operation, but for other processes needed after each call when the /B switch is not being used. It can also be used on a system with a mailer along with /B and will be executed after the call, just prior to returning to DOS.

Events

This version has a completely new event processor that can handle over 65,000 events. Events **no longer make use of an errorlevel test** for each external event, but allow you to specify a batch file to process. Because of the extensive changes to this

feature, your old SCHED.BBS event file will no longer be operable and cannot be converted properly. All events must be re-created as needed. Your old SCHED.BBS file can be deleted as all events are now stored on a node-by-node basis. The new event handler is explained in detail in *Features in Depth*.

Doors

As indicated previously, doors **no longer use the errorlevel option for execution**. In addition, the proprietary CALLINFO.BBS file has been replaced with the BBS standard DOOR.SYS file for wider compatibility. The DOOR.SYS standard is used by at least 6 other BBS systems and is considered a standard.

In addition to DOOR.SYS a second file is created on exit called USERINFO.DAT. This file contains additional information on the caller that is *WILDCAT!* specific and needed by *WILDCAT!* upon return from a door. Any changes made to USERINFO.DAT by the door are read and implemented by *WILDCAT!*, allowing alteration of many user database items from within the door environment. DOOR.SYS is by contrast a static file that is not reread upon return.

These changes in door operation require alteration of most door program batch processes. We realize this may be inconvenient, but hope the changes made will make *WILDCAT!* even more compatible with a wider range of door programs, and require less alteration in the future.

A conversion program to create CALLINFO.BBS from the information in DOOR.SYS and USERINFO.DAT is available for download from the MSI HQ BBS. WC3TO2.EXE was written by Dr. Hugh Mitchell and is very easy to operate. If you have doors that must have CALLINFO.BBS you should review the documentation for WC3TO2. See *Features in Depth* for details of the new door interface.

Questionnaires

Like events, the questionnaire facility has been totally redesigned. It now supports interactive updates to the user record based on response, and several other new features. These improvements create a situation that prevents operational conversion of any 2.xx series questionnaire files. We suggest printing your old questions and branch information prior to re-creating questionnaire files with the new release.

Again, we understand the inconvenience this may cause, but find it necessary to properly implement features desired by a majority of the *WILDCAT!* system operators.

PRO Series

Due to the massive structural changes made in the user, file and message databases, **no utility programs for version 2.xx that interacted with the config files or databases will operate with Version 3**. This includes all 3rd party utilities that interact with any portion of *WILDCAT!*'s configuration files or database files. Fortunately, most 3rd party utility authors have been active in the testing of the new release, and have already released updated versions of their products.

If you are using a utility program that you feel may not operate correctly with this new release, you should contact the author for a clarification. If you are unable to contact the author, feel free to leave a message to our technical support staff or look for an update on the *WILDCAT!* HQ BBS.

During the development cycle for Version 3 we attempted to contact as many 3rd party authors as possible to provide the necessary assistance for them to upgrade their products. We continue to be interested in assisting developers and encourage them to contact us for structural information or assistance. The PRO! Series have been completely rewritten to operate with the new release. An update is available for all previous owners; please contact the Mustang Software sales department for information.

External Protocols

The operation of protocols outside of *WILDCAT!* has been altered in several ways. As mentioned previously, the batch files now must be located in the HOME directory rather than the old startup directories. The number of downloads and uploads allowed in batch mode has been increased to allow up to 99 transfers in each direction, but is handled in a slightly different manner. *WILDCAT!* now makes use of a text file containing a list of files to be transferred. This file conforms to the syntax of Omen Technology's DSZ specification which is followed by several other protocols including MPT (previously Puma).

The tests for successful transfer have also been altered slightly and should be reviewed in the *Features in Depth* section.

These changes require relocation of your external protocol batch files, but few additional changes are needed. Please check the full feature explanation in *Features in Depth* and test your setup thoroughly.

Special integrated programs for the BiModem protocol are no longer distributed as a part of the *WILDCAT!* distribution disks. We encourage you to check the *WILDCAT!* HQ BBS for updated copies of the program and related utilities from Erik Labs if you are interested in offering this popular bidirectional protocol.

New Display Codes and Color Options

A new method of colorizing display files has been added. Although the standard ANSI-coded .SCR files may still be used, we have added a complete set of @ codes (see the back cover of the manual for a summary) for use in any file. The advantage of using the new @ color codes is a built-in stripping routine for non-color callers. This auto-stripping feature allows the sysop to create just one set of display files for both color and non-color callers.

For example, rather than creating HELLO1.BBS and an identical HELLO1.SCR with ANSI codes, you can now create just one HELLO1.BBS file using the @ color codes. These @ codes are removed by *WILDCAT!* before sending it to a non-color caller and are translated to the appropriate ANSI color code for color callers. The only reason to continue to have a separate .SCR file is when ANSI animation is used since there are no substitute @ codes for animated sequences.

In addition, all control codes for user and system information have been replaced by @ codes. These codes are easier to remember and can be added to your display files with any text editor, or with the new *wcDRAW* program, included with *WILDCAT!*.

Display file converters that change ANSI coded files to the new @ format, including the new user and system codes, are available for download from the MSI HQ BBS. See the section on *Custom Display Files* for complete information.

File Database

With the increased capacity of 1,000 file areas, *WILDCAT!* now performs some file search operations differently. It is much faster for the program to first check the disk when a search is requested using a file mask (*.* or WILD*.EXE) and then check for additional database match criteria when making file selections. For this reason, **directory paths should not be duplicated** across file area definitions. Each file area path should be unique. If this rule is not followed, file searches will result in files being listed in multiple areas, even though you have only made a database assignment to one (duplicated) area.

Changes Affecting Multiline Specifically

As you have seen from the previous discussion, one of the key changes with *WILDCAT!* Version 3 is the structure of the configuration and batch files. These changes were made to allow for a *single* set of configuration and batch files for all but the most complex multiline systems. Most *WILDCAT!* Version 3 installations can make use of one set of MAKEWILD files, one set of door batch files, one set of external protocol files and one HOME directory for all nodes. The following discussion touches on most of the important structure changes for the multi-node sysop.

Environment Variables

With releases prior to Version 3, the primary reason for separate configuration files was to establish a unique node ID for multi-node operation and to allow separate modem configuration parameters. All of these items are now configurable outside of MAKEWILD using environment variables.

These environment settings can be added to the AUTOEXEC.BAT file for a node needing different settings or to a special CAT.BAT file. The following are valid environment commands:

SET WCNODEID=2	override for the node ID #
SET WCPORTID=2	override for the com port #
SET WCIRQID=3	override for the IRQ
SET WCBASEID=$2F8	override for the com base address, the $ is a *required* hex identifier before the address
SET WCMDM=ULTRA	override for the modem screens

MAKEWILD still saves a default value for each of these when the configuration is saved, but each node can override any that are incorrect for its operation.

For example, every node other than the first in a multi-node system would have to have a WCNODEID setting to override the default (usually 1) set in MAKEWILD. Likewise, a two-node system under DESQview would need the second node on COM2 to establish an override for WCPORTID, WCIRQID and WCBASEID.

```
SET WCNODEID = 2
SET WCPORTID = 2
SET WCIRQID = 3
SET WCBASEID = $2F8
```

or

```
SET WCNODEID = 2
SET WCMDM = LINE2
```

As an alternative, the node on COM2 could also have just one override containing the entire modem settings in a separate .MDM file, and refer to it by name using the WCMDM= variable. Since a .MDM file contains all the references for port, IRQ and base address, the other three are not necessary.

More discussion of setting environment variables is contained in the multi-node section of the manual. You are encouraged to make changes to your system directory structure and batch files to make use of the new opportunities for sharing system-wide batch files whenever possible.

Quick Start

After completing the installation program you are ready to configure *WILDCAT!*. Although we strongly suggest that all operators become familiar with *WILDCAT!* by reading the entire manual prior to starting the program, we realize that many users feel comfortable with other methods of learning the program features. For those already familiar with the disk operating system, paths, file handling and/or have run other bulletin board systems in the past, you may do the following:

- *Install the appropriate program diskettes using the* ***WINSTALL*** *program, following the instructions Run* ***WUPGRADE*** *or* ***WCONVERT*** *if necessary.*
- *Create or modify your CONFIG.SYS file according to "Other Requirements" below*
- *Run MAKEWILD to configure WILDCAT! to your preferences, using the* F1 *key for detailed help at each question*
- *Set your modem switches correctly and set the NRAM if available using wcMODEM*
- *Run WILDCAT!*
- *Use the* F1 *function key to logon and enter your SYSOP information (remember, you are a new user the first time)*
- *At the WILDCAT! Main Menu, use function key* F9 *to upgrade your status to that of system operator*
- *To install Tomcat, run tcMAINT in your \WC30 directory to create a configuration file. Use the* F1 *Help key for an explanation of each configuration item. PKZIP and PKUNZIP, along with any other packers you decide to use with Tomcat,* ***must*** *be in your DOS path or in your \WC30 directory in order for Tomcat to function.*
- *Refer back to this documentation as a reference guide for more detail, for tips on special configurations, and for explanations of the various display files*

This quick start procedure is ONLY suggested for those who feel comfortable learning on their own. A step-by-step startup process is outlined in the chapters which follow.

Other Requirements

Whether you use quick start or the step-by-step configuration method, the following changes to your system must be made to your system file CONFIG.SYS. It **MUST** contain the statements:

```
FILES=40      —(place as the FIRST line in your CONFIG.SYS file)
BUFFERS=40
```

Add the above lines to the CONFIG.SYS file, located in the root directory of your hard drive (or the drive that boots up your system). You must reboot your computer for these changes to take effect.

***WILDCAT!* contains special code to allow DOS to open more than the normal maximum of 20 files at one time. The statement FILES=40 is VERY important.**

WILDCAT! contains a built-in color driver, so installing ANSI.SYS is not required to run in color mode. Other programs may require your ANSI driver, however, and no conflicts exist if ANSI is loaded. If your present CONFIG.SYS installs the ANSI driver you may leave it in place.

Chapter 4
Configuration with MAKEWILD

"You can get anything you want...
if you help enough other people get what they want."

unknown (but so true)

In this Chapter...

- The MAKEWILD program
  Step-by-step, screen-by-screen
- Program definition
  File areas, conferences, security, etc.
- Program paths
  Where all your files are located in your system

Makewild

A separate program called MAKEWILD.EXE is used to create and maintain the many options, menus, conferences and other features available in *WILDCAT!*. It must be run *before* starting *WILDCAT!*. To begin, first make sure that you are in the *WILDCAT!* home subdirectory that was created with the installation program. By default, this is C:\WC30. Begin the program by typing MAKEWILD.

Many of the configuration files created by MAKEWILD are read into memory during *WILDCAT!* operation, and modifications cannot be made while *WILDCAT!* is running. You may view the configuration settings using the command line switch **/R** for Read Only operation. In addition you may use **/M** to force monochrome, **/C** to force color or **/K** to kill mouse operation in MAKEWILD.

Once the program loads, it will search the existing directory for the configuration files. If the files are not found (the first time MAKEWILD is run), they will be created to contain the default values for the various entries in MAKEWILD. At this point you should be viewing the following screen:

```
08-04-93 | Makewild 3.90I (06/15/93) | 15:42:22

                General Definition
                Security Definition
                Modem Definition
                External Protocol Definition
                Menu Definition
                Security Profile Definition
                File Area Definition
                Conference Definition
                Door Definition
                Idle Screen Program Definition

        Copyright (c) 1989,93 Mustang Software, Inc.
        [F1] Help - [↑↓] select screen - [ESC] Exit
```

This screen is your first step in custom-tailoring *WILDCAT!* to your particular needs.

To move to a particular area of the configuration setup, use the up and down arrow keys to move the highlight bar over the description corresponding to the area you wish to view or edit. [⇥] (tab) and [SHIFT] [⇥] also move between items. Press [ENTER] to display the selected screen. A mouse may also be used to double click on the desired selection.

For purposes of continuity, the configuration screens will be presented in their natural order of occurrence. In actual use you may jump from one installation screen to another at any time without returning to the Main Screen, by using the [PG UP] and [PG DN] keys.

MAKEWILD User Interface

This section will familiarize you with the operation of the various screens in MAKEWILD, the configuration program. It also describes the use of a mouse and operation of keyboard keys when performing special functions.

Most screens in MAKEWILD are simple fill-in-the-blanks text entry screens. In these screens you can move around from field to field using the cursor keys, and enter the information requested. The [PG UP] / [PG DN] keys move from *screen to screen* in MAKEWILD. There are however, several other types of screens for more advanced data-entry processes.

Pop-up Windows

Some screen fields display pop-up windows when [ENTER] is pressed. Once the window appears you can choose additional options to customize the item associated with the field. These are screen displays in which a single item or field on the screen leads to an additional series of items when it is selected and [ENTER] is pressed.

Sometimes every item on a screen brings up a pop-up window and other times only one of the fields on a screen leads to a pop-up window. To access the pop-up menu and change the selection:

1) Move the mouse cursor over the item text and double click the left mouse button. A pop-up menu appears.

2) Move the text highlight bar or cursor over the item and press [ENTER].

Within a pop-up window you move around and enter data just as you do elsewhere. When you have finished entering the data required, press [ESC] to save your changes, close the window and return to the previous screen.

Pick Lists

A pick-list is a window that allows selection of multiple items at one time by activating a selection dot next to the each desired item.

```
FILE DOWNLOAD ACCESS
( )   1 - BBS Advertisements
( )   2 - Beta Test area - S (Private)
( )   3 - Communications
( )   4 - DOORS - may expire or need key
( )   5 - Editors
( )   6 - DESQview Files & Info
( )   7 - Generic Sysop Utilities
( )   8 - WILDCAT! "S" Version Files
( )   9 - Net & Echomail Files & Info
( )  10 - Text Files & Information
```

The arrow keys move the highlight bar from item to item and the [SPACE] is used to toggle the selection dot on or off. The mouse may also be used to scroll the list and to toggle the selection dot by double-clicking on the desired item. In addition, a range of items on a large list may be marked using [F7] to begin and [F8] to end a block. WordStar commands [CTRL] [K] - [B] and [CTRL] [K] - [K] can also be used. Once a range has been marked, use the [SPACE] to toggle all marked items. All items in a list can be selected with [ALT] [S] and all items can be cleared with [ALT] [C].

Keyboard Control

When entering data in MAKEWILD, the following editing keys are available:

[F1] ..... Context sensitive help

[SPACE] ..... Toggles field choices if multiple choice

[←] ..... Move left one space in current field

[→] ..... Move right one space in current field

[↑] ..... Move to previous field

[↓] ..... Move to next field

[ENTER] ..... Move to next field

[⇥] (tab) / [SHIFT] [⇥] (tab) Move forward/back one field

[HOME] ..... Positions cursor on first character of current field, or the top of a list

[END] ..... Positions cursor at the end of current field, or the bottom of a list

[PG UP] ..... Move to previous screen (except in pick lists)

[PG DN] ..... Proceed to next screen (except in pick lists)

[CTRL] [PG UP] ..... Move up one page in current screen

[CTRL] [PG DN] ..... Move down one page in current screen

[INS] ..... Toggles insert/overtype mode. The cursor size indicates the status of the toggle. In Insert mode the cursor is thicker and characters are pushed to the right. In over-type mode the characters under the cursor are replaced by those that are typed, and the cursor is thinner

[←] (backspace) ..... Delete character to left of cursor

[DEL] ..... Delete character immediately under cursor. The Backspace and Delete keys work the same regardless of the status of the Insert key

Some screens make use of function keys for specific applications. Watch the line at the bottom of the screen for details.

Mouse Control

A mouse may be used for selecting many options in MAKEWILD. All fields are mouse sensitive as are all pick-list items. Pick-list items (marked with a dot) may be turned on and off by clicking on the item desired. Clicking both mouse buttons brings up the help screens. Mouse users should feel comfortable with the operation of selection fields and scroll bars since they follow the industry operational standard.

Don't forget to use [F1] or click both mouse buttons for complete context sensitive help at almost any MAKEWILD prompt! Press [F1] again for a list of other help topics.

```
08-04-93 | General Definition - Part 1 | 15:45:49

 1. What is the sysop's first name          : John
 2. What is the sysop's last name           : Doe
 3. What is the name of your BBS            : WILDCAT! BBS
 4. Date your board took its first call     : 12-20-90
 5. What is your registration number        : 00-0000
 6. Number of conferences                   : 26
 7. Number of file areas                    : 26
 8. Number of external doors                : 0
 9. Number of idle screen programs          : 0
10. Path for user database                  : C:\WC30\DATA\
11. Path for file database                  : C:\WC30\DATA\
12. Path for node information file          : C:\WC30\DATA\
13. Path for message file attachments       : C:\WC30\ATTACH\
14. Auto determine node ID                  : N
15. Node ID                                 : 1
16. Network type                            : Single line

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[F1] Help - [ESC] Exit
```

General Definition - Part 1

1. What is the sysop's first name : John
2. What is the sysop's last name : Doe

The system operator's (SYSOP) name which is chosen here is reflected automatically in the system statistics screens.

Each conference also has provisions to have the same or different name for the sysop. If the conference has a conference sysop, comments are directed to the conference sysop as entered in the conference definition section of MAKEWILD. If there is no conference sysop for a particular conference, the caller will be unable to enter a comment to the sysop in that conference.

3. What is the name of your BBS : WILDCAT! BBS

This is to identify the "official" name of your Bulletin Board System in various areas of the board. Be creative, but some thought should be given to a title that lends credence to the actual theme of the board. If a company or corporation has a title that is conducive to its operations, by all means use that name. For example:

```
XYZ Corporation BBS
Sub Sailor's BBS
Center City Computer's BBS
```

4. Date your board took its first call : 12-20-90

The date of origin is to set a starting date for the board's operations. This establishes a starting date for any files that are dependent upon this information, such as a call reporting program or the system's user log. Operators who are converting to *WILDCAT!* from other BBS programs may retain their original start date.

5. What is your registration number : 00-0000

Enter your personal registration number from the inside cover of your manual here. It is displayed in the copyright notice, indicating your program registration to callers.

6. Number of conferences : 26

Enter the number of conferences to be offered here. For an explanation of what a conference is and how one operates, see the section entitled *Conferences* in Chapter 1. The number of conferences offered has no effect on the number of separate file areas offered. You can easily configure your system with only one conference, but with up to 1,000 separate file areas.

The number of conferences has an effect on the size of each user's record in your system, since conference-specific information is stored for each user. You are encouraged to establish as many conferences as desired, but need to be aware that each conference adds 4 bytes per user. The base size of each user record is 870 bytes, plus 4 bytes for each conference. The formula for determining how much space is needed for a user database is:

$$\frac{(870 + (4 * \#CONF)) * \#USERS}{1024} \qquad \frac{\text{bytes needed}}{\text{bytes per K}}$$

For example, a typical system with 5 conferences and 500 users creates a User database of about 435K [(870 + (20)) * 500/1024].

Changing the number of conferences after a user database has already been created requires adjustment of the user record size in the database. When the number of conferences is changed, MAKEWILD displays a pop-up window confirming that you want to re-size the database and make the adjustment for additional conferences. This re-size of the database can be forced by pressing the F2 key.

7. Number of file areas : 26

Do not confuse the file areas with the conferences. They do not share the same values or names and are usually not related in any way. For example, you could have three conferences and still maintain up to 1,000 file areas. File areas are usually organized by type of file, although they could be grouped by other criteria.

8. Number of external doors : 4

"Doors" is the term given to other programs your callers may run via menu selection from within *WILDCAT!*. Many door programs are specifically written to perform input and output to the communications ports, but most other programs can be operated successfully as a door using special redirection processors. Until the sysop is familiar with the BBS and has explored the requirements for door implementation later in the manual, we suggest this value be set to zero.

9. Number of Idle Screen programs : 2

This selection is used to let MAKEWILD know how many other programs will be run from *WILDCAT!*'s Idle Screen. When idle and waiting for calls, the sysop can run additional programs from a menu. By default these programs include MAKEWILD in Read-Only mode and *wcMODEM*.

10. Path for user database : C:\WC30\DATA\

We recommend the user database be stored in a separate path from the regular program and display files, but that it reflect the same path as the other databases in a *WILDCAT!* system. Unless you need to place them on different drives or volumes due to space limitations, this path should match the file database and node information file. ALWAYS include a specific drive letter in the path for databases.

11. Path for file database : C:\WC30\DATA\

Like the user database path, this area should be separate from the balance of the program files. This helps keep your BBS organized, and makes automated backups simpler.

12. Path for node information file : C:\WC30\DATA\

This path reflects the location of the shared control file for all nodes, NODEINFO.DAT, which is updated by *WILDCAT!* as the program is operating. It tracks basic node status for each node (up or down), and the total number of calls received by the system. It also contains full status information on each node including the printer toggle, page bell, page override, screen writing, last caller, availability for chat, the call count for each node, and more.

Also stored in this path is the door control file DOOR.DAT and the FIDO-compatible nodelist file for Net and Echomail, if used.

13. Path for message file attachments : C:\WC30\ATTACH\

This path reflects the location of all files that are attached to messages. Whenever a message is created with a file attached, the message recipient is allowed to download the attached file after reading. This file does not become a part of the file database, and is erased when the message is killed. All attached files are stored in the subdirectory specified in this field.

14. Auto determine node ID : N

This item applies only to multiline systems and is not available in the single line release.

Rather than assign specific individual node identification numbers to each incoming line or network node, you can elect to have *WILDCAT!* automatically assign the next available node ID number to each "line" or "node" that is activated. Unless you are operating on a LAN with a large number of local workstations we suggest the default value N.

The advantage of this feature becomes apparent in a LAN situation where you want to avoid setting up each user with a distinct Node ID in the user environment. The disadvantage is the inability to reference specific workstations or dial-in lines by node ID in display files and through the Utility program CATEYE. An even bigger disadvantage is that workstations can monopolize an ID permanently if they fail to properly exit *WILDCAT!* or return from a door.

If autonode ID assignment is applicable in your situation, see the documentation for AUTONODE.EXE in Chapter 9 for detailed instructions. Single line users may ignore this setting, and multiline users may alter it after reviewing the section on *Multiline Operation* and the README files.

15. Node ID : 1

This item applies only to multiline systems and is not available in the single line release.

This number is always 1 in a system running only one line (one node). In a multi-node system you should set up your first line with a node ID of one, and then establish additional lines with different ID numbers. You are not forced to create a separate MAKEWILD configuration file for each node. This number may never exceed the maximum number of nodes supported by your *WILDCAT!* version. See the section entitled *Multiline Operation* for details of node assignments for multiline systems and networks.

16. Network type : Single line

This item applies only to multiline systems and is not available in the single line release.

Use the spacebar to toggle your choice. The default choice "Single line" should be used for any BBS system with only *one* phone connection, regardless of the *WILDCAT!* release. Additional choices include Novell and DOS SHARE for multiline operation using the SHARE command. Multi-node systems should establish a single line system before attempting to add additional nodes. See the *Multiline Operation* section for additional information.

Do *not* set your system to DOS SHARE or NOVELL unless you are operating more than one connection.

```
08-04-93 | General Definition - Part 2 | 15:58:03

 1. Will you be offering color ANSI menus  : Y
 2. Database file safety mode              : None
 3. Terminate on DOORS and MENU Hooks      : N
 4. Swap out during DOS shells             : Y
 5. Where should swapped data be held      : DISK
 6. Hold overlay in EMS if available       : N
 7. Extra memory in K for overlay buffer   : 0
 8. Default number of lines per page       : 23
 9. Check if printer online                : N
10. Dynamic file keyword generation        : N
11. Clear screen before menus              : N
12. Take modem off-hook on exit            : N
13. Default file extension                 : ZIP
14. Inactivity before flexible events      : 5
15. Time to start forcing flexible events  : 18:00
16. Display the quote of the day           : Y

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[F1] Help - [ESC] Exit
```

General Definition - Part 2

1. Will you be offering color ANSI menus: Y

This question is needed to let *WILDCAT!* know whether or not to allow users to turn color on in their user record. Without this question a caller could request color menus and simply not get any, perhaps thinking there was a system problem.

2. Database file safety mode : None

As a default feature, the databases that control files, messages, users, and other program elements will perform integrity checks as data is changed. Setting this parameter to "None" results in slightly faster database operation, but the possibility of database contamination due to power fluctuations or other problems is higher. The "partial" safety mode flushes file changes to disk more often and offers slightly less chance for corruption due to unexpected system shutdown. "Full" safety mode adds yet another level of protection, that of a separate "diagram" file with the

extension .DIA used for tracking database entries. "Full" safety mode demands additional processor and disk time, and is recommended only on networks with very fast access such as Novell. Remember, there is little danger from a database integrity problem, even with safety mode set to "None" since the wcREPAIR program can rebuild a damaged database very easily.

3. Terminate on Doors and Menu Hooks : N

This is a very important option. This field controls how *WILDCAT!* handles the batch files for operation of doors, remote drop to DOS and menu hooks. The default is N which indicates *WILDCAT!* should not terminate to execute these batch files, but should shell to another copy of the command processor to run them.

The advantage of shelling rather than terminating is that no sysop intervention is needed, and no tests in the CAT.BAT file need be made. The only disadvantage is that memory is limited unless *WILDCAT!* is swapped out, either to disk or EMS. ***We strongly suggest you do not terminate, but use a shell.*** Combined with swapping to disk or EMS/XMS (the next question), it provides the easiest integration of otherwise problematic batch processing.

Full details on each batch process are explained in the *Features in Depth* section.

4. Swap out during DOS shell : Y

The answer to this question determines whether all DOS command shells "unload" the *WILDCAT!* code from memory during processing.

A shell takes place whenever a second copy of the command processor (COMMAND.COM) is loaded, i.e., when a local user presses ALT-D (local drop to DOS), when external file transfer protocols are implemented or even whenever doors or menu hooks are executed. In these situations *WILDCAT!* would normally be left inactive in memory, with *instant* return after the shell was completed. Leaving the program in memory results in very quick return, but the memory used by *WILDCAT!* is not available in the shell. If you elect to swap the program out of memory, the system will regain use of almost full memory capacity during the shell procedure. *We strongly suggest swapping during a shell.*

5. Where should swapped data be held : DISK

The three alternatives here, EMS, XMS or DISK, are toggled with the spacebar. This question may be ignored and has no effect if you have answered NO to the previous two questions. If you do not have EMS or XMS then disk is your only choice. If EMS or XMS is available and is selected, shell swapping takes place instantaneously, and makes huge amounts of memory available very quickly. If EMS or XMS is

selected and is not available, a disk swap is used. Even if EMS or XMS is not available, the swap to disk should be used if possible to make program batch process easier to manage.

6. Hold overlay in EMS if available : N

The overlay file for *WILDCAT!* contains procedures which are moved into and out of the main program code as needed. Every time a portion of the overlay file is needed by the main program, a disk read is made from the file. Although this does not usually cause a noticeable delay, loading the entire overlay file into EMS results in almost instantaneous access.

7. Extra memory in K for overlay buffer : 0

As indicated in the previous question, portions of the overlay file are read into a reserved space in the main *WILDCAT!* program as needed. The size of this space (always in the base 640K memory area) may be expanded to hold more of the overlay file if desired. The advantage might be if a system did not have EMS, and wanted the entire overlay to always be available without reloading from disk. This field will accept a memory value in K up to the size needed to hold the entire overlay in regular memory. If you are holding the overlay in EMS, you should leave this option at 0.

8. Default number of lines per page : 23

The user is prompted during the initial logon to enter a value for the number of SCREEN lines per page. This value is used throughout the program to determine the appropriate position for automatic screen pauses. The value entered here is presented as the default value if the new user simply presses the ENTER key, and is correct for most PC users.

9. Check if printer online : N

Before sending text to the printer, *WILDCAT!* checks that it is on-line and operational. Since there is no standard set of rules for sending printer error messages, each printer does it a little differently. If you experience problems such as a locked system when trying to print when your printer is off line or out of paper, change this to N.

10. Dynamic file keyword generation : N

When files are uploaded to your BBS by callers, each file contains a set of six keywords used to quickly reference the file during searches. Ideally these six keywords should reflect the file type and description. This option allows you to dynamically generate the six keywords from the description entered by the caller. The alternative is to accept the default choice of **N**, and *WILDCAT!* will prompt the caller to type in six keywords after the upload is complete. Disallowed keywords can be placed in the file BADKEYS.LST. See the section on display files for details.

11. Clear screen before menus : N

Depending on your preference, you may clear the caller's screen prior to each menu being displayed. Experiment both ways and take your choice. This choice is primarily for dynamically displayed menus since the sysop has the ability to embed a clear screen code at the beginning of text and ANSI menus, if desired. Additional information on embedded codes is contained in the *Display Files* section later in this manual.

12. Take modem off-hook on exit : N

When set to **Y**, and the system is brought down using F10, *WILDCAT!* will send a message to your modem to place the phone off-hook (busy). This may be advisable if your board is running on a dedicated phone line, since callers will think the system is busy rather than thinking it is discontinued and off-line.

13. Default file extension : .ZIP

This is the file extension that will be checked when [D]ownload, [V]iew a compressed file or [I]nfo on a file is requested with no file extension. It allows callers to specify files without an extension if many or all of the available files have a common extension. It is only used if the file (without the extension) is *not* located.

14. Inactivity before flexible events : 5

As you will learn later in this manual, *WILDCAT!* allows execution of various processes at specified times called events. Flex events are those whose time of execution is not specified, except to say on which days it must execute. These events will be run whenever *WILDCAT!* is at the Idle Screen waiting for calls for at predetermined period of time specified at this prompt. This selection allows you to specify the number of minutes the BBS must be inactive before these events can be started. See *Features in Depth — Events* for more information.

15. Time to start forcing flexible events : 18:00

If the system has been so busy taking calls and performing other activity that a scheduled flex event has not executed by a predetermined time, the flex event may be forced to occur regardless of the Idle Screen time. Specify the time of day to begin forcing flex events at this prompt. See *Features in Depth — Events* for more information.

16. Display the quote of the day : Y

The "Quote of the day" is an ASCII file created by the system operator. It may contain words of wisdom, quotes from famous people, cute sayings, insults, or anything else appropriate to the needs of the system. The file contents are presented sequentially starting with the first item in the file, and incremented by one following each new logon to the system. The quote appears just prior to the main menu. When the end of the file is reached, it starts again from the beginning. A "quote" consists of any number of lines of text, each of which is terminated by a carriage return. There must be a blank line (just a carriage return) between each quote since *WILDCAT!* assumes an individual quote has ended when it sees two carriage returns in a row.

If this option is set to "Y", *WILDCAT!* will look for the file QUOTES.BBS. If the file is not found, the code will continue to run, but will generate an error message to the sysop. A sample QUOTES.BBS file is included. For more information on creation of this file, refer to the *Display Files* section of the manual.

```
08-04-93 | General Definition - Part 3 | 16:58:02

 1. New user security profile              : NEWUSER
 2. Display security profile to caller     : N
 3. Screen blanker type                    : Box
 4. Video adaptor type                     : Auto Detect
 5. Use free form phone numbers            : N
 6. Are bulletins optional                 : N
 7. Date format for country                : 11/17/67 (MM/DD/YY)
 8. Time format for country                :  3:30pm
 9. Force callers to 8/N/1                 : N
10. Allow file transfers over time limit   : Y
11. Use file indexes for wildcard searches : N
12. Copy files from CDROM on transfers     : N
13. Enable RIP graphics support            : N

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[F1] Help - [ESC] Exit
```

General Definition - Part 3

1. New user security profile : NEWUSER

Security in *WILDCAT!* is based on profile names assigned to groups of users. Each profile name contains information assigning or limiting access to various system resources. The specific access allowed for each profile will be established later in MAKEWILD, but for now just enter the profile name you want to assign to new users. The name entered here will establish the access rights of every new, unknown caller to your system. Make certain this profile name is assigned when you make your security profile definitions. It must exist or *WILDCAT!* will not accept new callers.

2. Display security profile to caller : N

By default a caller can use the main menu command [Y]our settings to view and change some of his user record items. The security profile assigned is displayed on this screen by default, but can be suppressed by changing this to N.

3. Screen blanker type : Box

Screen blanking refers to the ability to turn off or limit screen writing in order to avoid "burn-in" of a constant image on the display. *WILDCAT!* offers several choices and this question makes use of multiple-choices toggled by the spacebar.

None is the first option and results in no screen saving activity.

If None is selected, you are cautioned to turn off the monitor when not in use, or to take other precautions to avoid burn-in.

Box is the default choice and results in a small box display on screen that contains brief information on the last call. The box moves around the screen to avoid burning-in any specific location. When a call is received or any key is pressed, the full Idle Screen is again displayed.

Blank-out is a choice which results in the entire screen being cleared after a delay. When a call is received or any key is pressed, the full Idle Screen is again displayed.

Fireworks is the final choice and results in a colorful display of small pixels launching up the screen at random intervals and locations, each exploding into the word *WILDCAT!* at the top of the arc. It operates in graphics mode and is compatible with CGA, EGA, VGA, MCGA, and Hercules graphics formats. Some monochrome cards will not properly display this feature and it should not be used if problems are encountered. In a DESQview system it may also be disabled to avoid the additional processor and memory use required for displaying both text and graphics. See the DESQview section for additional discussion.

4. Video adapter type : Auto Detect

Although *WILDCAT!* has the ability to look at your system and determine what type of video card is attached, you may override this default selection. This may be necessary on some systems which have a single color monitor connected to a graphics controller card that does not display some colors properly. One example we have found is the AT&T 6300 series which requires a Mono setting. Most systems work best when set to Auto, and this is the recommended setting unless problems become evident. If a change is needed, toggle the available choice with the spacebar.

5. Use free form phone numbers : N

The default value of N indicates that phone numbers will be automatically formatted as 000-000-0000, and the system will supply the punctuation characters. Since many foreign phone numbers do not follow this format, the Y option allows entry of phone numbers as a numeric field of 15 characters with punctuation supplied by the caller as desired.

6. Are bulletins optional : N

By default every caller views the bulletin menu after the HELLO screens on every call, regardless if bulletins have been updated since the last call. Changing this field to Y results in callers being notified of new bulletins and asked if they would like to view the bulletin menu.

7. Date format for country : 11/17/67 (MM/DD/YY)

The format for the date may be changed as needed. Toggle the available choices using the spacebar. The selected format will be reflected in all displays to your callers.

8. Time format for country : 3:30pm

The time format may also be changed by pressing the spacebar to use different delimiters or military vs. a.m./p.m. formats.

9. Force callers to 8/N/1 : N

This option must be used by non-US sysops if they want users to be able to login with names containing extended characters. It disables 7/E/x logins. The default of N should be used by most U.S. sysops.

10. Allow file transfers over time limit : Y

If you answer "No" to this question, *WILDCAT!* will log-off callers during a download if they exceed the time for that call, even if they had enough time remaining to start the download. If you answer "Yes", the download will be allowed to continue, no matter how long it takes. Only a HARD event will force a caller off in this case.

11. Use file indexes for wildcard searches : N

If this option is set to "Yes", all file searches are made using the internal file database index keys from the beginning, rather than looking to DOS first to limit the amount of database activity. Unless you are making use of CD-ROMs that are being read directly, you may want to leave this option set to the default of No, since using the indexes alone is slower.

12. Copy files from CDROM on transfers : N

Changing this option to "Yes" results in a copy of the file to the node work directory prior to beginning the transfer. It is designed to allow the use of CDs and CD changers that may be too slow for a direct download. It is only activated for files that are flagged as ON CD. The procedure sorts all requested files by drive letter and copies files from one drive at a time to the node work directory for transfer. Note that this option can require a large amount of disk space, especially on multi-line systems.

13. Enable RIP graphics support : N

Enabling this option will turn on RIP detection, which will then display .RIP files along with .BBS/.SCR display and menu files.

```
08-04-93 |                Security Definition                | 16:07:15

     1. Type of BBS system                          : Open
     2. Allow drop to DOS from remote               : N
     3. Verify location at login                    : N
     4. Number of password attempts                 : 5
     5. Log off for failed birthdate or phone       : N
     6. Display password protected files            : N
     7. Overwrite multi-user chat files             : N
     8. Lock out on security failure                : N
     9. Console security type                       : None
    10. Wildcat! console password                   :
    11. Allow user to change birthdate              : Yes
    12. Allow user to change phone number           : Yes
    13. Allow user to change alias                  : Note to sysop
    14. Can SYSOP read private mail                 : Y

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                  [F1] Help - [ESC] Exit
```

Security Definition

1. Type of BBS system : OPEN

The possible choices here are **Open**, **Closed**, **Closed Comment** or **Closed Questionnaire**. Use the SPACE to toggle through the four alternatives. Open is the default. This means that all users will be allowed to sign on to the system and will be entered into the user database as they call. The user's "freedom" on the board will then be determined by the security profile assigned to the user.

If this field is toggled to Closed, you are indicating that unless the user's name and password information is recognized by the system, that user will not be allowed into the system for any reason. A file named CLOSED.BBS will be displayed, and the caller will be logged off immediately. The user's name and other information are *not* added to the user database.

Note: Running as a closed board means that *all* user information must be added *manually* by the sysop for *every* user before they can gain access to the system. *A Closed board must first be set as Open to enable the sysop to log on and upgrade his or her own access.* See the section *After Makewild* for additional information.

Should this item be toggled to Closed Comment, all new users will be denied access to the system just as in the previous choice, but prior to log off they will be placed in the Comment message system to enter a note to the Sysop, if desired.

The final choice is Closed Questionnaire which places all new users into a special questionnaire file named QUESCLOS.BBS prior to being logged off the system. More information about Questionnaires is included in a later manual section.

It should be noted that you can operate a semi-closed board by setting this choice to Open, but limiting access to new callers through a restrictive security profile NEWUSER. One alternative is to allow members of NEWUSER to leave comments, answer questionnaires, and use any other menu selections you desire, but with limitations. This configuration has the advantage of letting the caller fill in user settings rather than placing the burden of preregistration on the sysop.

2. Allow drop to DOS from remote : N

If this prompt is answered with Y, and the caller's security is high enough to permit it (we suggest that only sysops be allowed this choice), the caller may actually exit *WILDCAT!* and assume control of the computer's operating system. It is unlikely that anyone other than the system operator, when calling in from a remote location, will ever need this option. Setting this value to N prevents use of the Remote Drop to DOS option on the sysop menu. It does not prevent DOS access via any of the DOS Hooks if implemented for that purpose.

Caution: This is not only a powerful option, but potentially a very dangerous one. Unless other safeguards are implemented, a caller has total and absolute control over your entire operations, including erasing the contents of your hard drive! Unless you are totally familiar with the operating system, batch files and related areas, you are strongly encouraged to set this value to N.

3. Verify location at login : N

Setting this option to Y results in each caller being asked to confirm identity by displaying his or her location in the form:

```
Are you DELBERT WALRATH from Oildale, CA? [Y]
```

If verification is on, the caller must confirm his identity.

4. Number of password attempts : 5

This number indicates how many tries a caller will be given to enter a correct password, birthdate, or phone number. Values from 1 - 10 are allowed.

5. Log off for failed birthdate or phone : N

This option controls how callers are processed if they fail to properly enter their birthdate or phone number when used as a security verification item. The default of N allows the caller to continue the login, but forces a message to the sysop to explain why the item in question was not verified properly. If set to Y, the birthdate and phone login prompts are treated just like a password, and the caller is denied access upon failing to answer correctly.

6. Display password protected files : N

WILDCAT! has the ability to require a password to download a file, and the sysop determines whether these files are listed along with the non-protected files or are hidden from view. If the N option is selected, users will not know of the existence of password protected files unless advised by a message or some other means. The sysop can see the files in a listing, and they are tagged with the letter P in the margin as a note that they are protected.

7. Overwrite multi-user chat files : N

In a multiline system the group and private chat feature operates by creating a disk file containing the text entered by the callers on the two lines engaged in chat. This file is then read by each node in chat whenever it is updated by the other node in chat. This is the only feasible method of sending the information to the proper locations in an orderly manner.

This option allows the sysop to specify whether the disk files are started "fresh" each time a chat is initiated, or if new chat sessions should be appended to the end of the current file. Appending rather than overwriting allows the sysop to view the contents of chat sessions which took place since the file was created using the VIEWCHAT.EXE utility. These files can rapidly grow to quite a large size and should be monitored for deletion just like the activity log file.

The response to this question also controls the capture file used when the sysop answers a page or initiates **local** chat with the F6 key. The capture file LCHAT.xxx, where "xxx" is the node number with which the sysop initiated chat, is either appended to or overwritten, the same as the inter-node chat files.

If a single-line only release of *WILDCAT!* is being operated, this value defaults to append to the capture file since inter-node chat is not possible and this option is not used or seen onscreen.

8. Lockout on security failures : N

If toggled to Y, a user will be locked out of the system upon failure to properly answer questions regarding password, birthdate, and phone number within the number of attempts allowed. This lockout is also invoked if a user hangs up at a verification prompt after entering a name. Keep in mind that the lockout will occur due to loss of carrier for any reason at a security prompt since a hang up during verification is an unacceptable action if this option is implemented. The caller is afforded an opportunity to enter a message of explanation prior to disconnect. If this feature is implemented the sysop should disable the main menu command [U]serlog list to prevent prank callers from intentionally locking out others by using their name and failing the password prompt.

This option is needed only by systems offering the most sensitive data, and perhaps limited access. It is an extreme method of ensuring system security, implemented without regard for user convenience or sysop maintenance.

9. Console security type : None

This option controls keyboard access to the computer running *WILDCAT!*. The default value, **None**, allows full access to the computer and all Idle Screen options.

Pressing the [SPACE] toggles the choice to **Password**, which will lock the keyboard except for [ALT] [L] and [F10], and prompt for a password when other keyboard use is attempted. After an Idle Screen option is run with a password, the password lock is again implemented. The screen display in this configuration does not show the status lines at the bottom of the screen, and cannot be changed. This selection allows some control of the system, but in no way makes it secure since DOS access may allow changes to the control files.

The third choice is **No console**, which disables all keyboard commands except for [ALT] [L], [F10] and the system reboot [CTRL] [ALT] [DEL]. The screen display does not show the status lines on the bottom of the screen, and may be configured to turn off screen writing prior to implementation.

System security in an open setting is not absolute. The following areas of concern need to be addressed when *WILDCAT!* is operated with access to local keyboards, either in a LAN setting or stand-alone.

Security Note

Regardless of the settings implemented here, a user can change the entire configuration of your system if access to the configuration files or MAKEWILD is granted. This is compounded by the fact that in order to operate properly, all nodes require read/write access to these files, and the file structures are published and available for third party utility developers. The most secure setup makes use of menu-based access to *WILDCAT!* using the command line for local login, with no DOS access on the PC in use. This type of system could be established in most LAN settings, including universities and large corporate systems.

Although *WILDCAT!* does not represent a secure local mail environment for the above reasons, it is *absolutely* secure when properly configured as a dial-in system.

10. WILDCAT! console password :

If console security is established in the previous question, enter the local console password to be used here, up to 15 characters. We recommend setting the console password to something OTHER than your own sysop password!

11. Allow user to change birthdate : Yes

The choices available are selected by pressing the SPACE. By default, users can change their birthdate at the Main Menu choice [Y]our Settings. Since this date should be static, and may be used as a security verification item, the sysop may want to control and be advised when changes are made. If this item is set to **Note to sysop**, all attempts to change the birthdate field will result in a message to the sysop from the user explaining the reason for requesting the change.

12. Allow user to change phone number : Yes

The choices available are selected by pressing the SPACE. By default, users can also change their phone at the Main Menu choice Your Settings. Since this item should be static, and also may be used as security verification item, the sysop may want to control and be advised when changes are made. If this item is set to **N**, all attempts to change the phone field will result in a message to the sysop from the user explaining the reason for the change.

13. Allow user to change alias : Note to sysop

Pressing the SPACE toggles the choices for this field. By default, users can establish a new (first time) alias name in any conference that allows aliases, but may NOT change their alias name once it is established, without the sysops's knowledge and

assistance. This default is based on the fact that if a user's alias is changed, there will no longer be notice of mail addressed to the old alias, and other callers may become confused about who is whom. In some conferences random username confusion may be desired, but in most it is not. If the conference goal is to allow users anonymity but to retain permanent "handles." then the default setting is correct. However, if you do not mind users masquerading as multiple personalities, you may change it to **Y** and allow alias changes at will. All changes are logged to the activity log regardless of this setting. When this item is set to the default of **Note to sysop**, all attempts to change the alias field result in a message to the sysop from the user asking the sysop to make the change and explaining the reason for the change.

14. Can SYSOP read private mail : Y

This is a board-wide setting that controls whether a user with sysop status in the message area (whether a message co-sysop or full sysop), can read private messages addressed to others. It overrides all other user settings.

The default setting allows a sysop to read private mail. Even with this set to the default of Y, each user with sysop message reading access can be limited from reading private mail on a user-by-user basis in their user record.

The rule to apply is: This must be set to Y if *any* user with sysop access is to be able to read *any* private mail in *any* conference.

```
08-04-93 | Modem Definition - Part 1 | 16:10:15

   1. Communications port number                : 0
   2. Communication port IRQ                    : 04
   3. Communication port base address           : 03F8
   4. Determine ringing using                   : Ring detect
   5. Determine baud rate using                 : Result code 1
   6. Initialize port at what baud rate         : 2400
   7. Lock DTE at initialization baud rate      : N
   8. Use CTS/RTS flow control                  : N
   9. Number of seconds to wait for carrier     : 30
  10. Milliseconds before answering             : 1000
  11. Milliseconds to lower DTR for hangup      : 2000
  12. Milliseconds to delay before prelog       : 1000
  13. Milliseconds to wait for result code      : 2800
  14. Milliseconds between command strings      : 2000
  15. Trigger level for FIFO                    : 4
  16. Intelligent multiport card                : Digiboard

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   [F1] Help - [F3] Load .MDM File - [F5] Save .MDM File - [ESC] Exit
```

Modem Definition - Part 1

Interfacing with many different modems is one of the most difficult areas in any program that deals with the computer's communications ports. If your *WILDCAT!* installation is not working the way you believe it should, more than likely the problem will be in this area.

In an effort to provide the easiest setup, standard configuration files have been prepared. Before changing any settings, check to see if your modem name appears in the list on the following page. If so, make note of the standard configuration that matches your modem. If your modem isn't listed, use the following guidelines to select one of the standard choices:

STD-1 - Standard modem setup #1. This type of modem usually has a maximum speed of 300 or 1200 baud but may also support 2400 baud. It does *not* have nonvolatile RAM in the modem to store the AT settings on a permanent basis. It does *not* support the extended Hayes commands &C, &D, or &W. It does use a set of dip switches to control modem features such as the DTR line, Carrier Detect, etc.

STD-2 - Standard modem setup #2. This type of modem usually has a maximum speed of 2400 baud, does *not* have nonvolatile RAM in the modem to store the AT settings on a permanent basis. It does *not* have many dip switches for modem control other than com port address. It *does* support the Hayes extended commands such as &C and &D.

NRAM - This type of modem usually has a maximum speed of 2400 or above and *does* make use of nonvolatile RAM in the modem to store the AT command settings. It must support a method of saving modem settings to nonvolatile RAM, usually with the command &W.

Once you have selected a standard modem configuration that matches your modem from the list below, import the settings by pressing the F3 key and highlighting your choice.

STD-1
US Robotics Courier 2400
Everex 2400 (no MNP)
Hayes 1200
Tandy 1200 & 2400
USR 2400

STD-2
Hayes Personal Modem
NEC2420
Packard Bell 2400
Practical Peripherals 2400
Zoom 2400

NRAM
ATI (all models)
Cardinal 2400 EX & 2450
Everex 941
FastCom 9600 (all models)
Galaxy UFO
Hayes 2400, V9600 & Ultra
US Robotics HST (all models)
Intel (all models)
Leading Edge 2400
MultiTech (all models)
NEC 9635
Omnitel
Practical Peripherals 9600SA
Prometheus Promodem 2400
Supra 2400
Telebit (all models)
Ventel (all models)

You may notice that there are a number of modem files listed in addition to STD-1, STD-2, and NRAM. These are modems that are nonstandard, and cannot save their information in NRAM. If your modem is listed by name, use it rather than the standard choices. There are very few modems that require a separate file. If you find that your modem cannot make use of the standard files and needs a special .MDM file, it will be created using the wcMODEM program. wcMODEM provides an environment for testing modem responses and is the ideal testing facility for nonstandard modems. If the initial testing after MAKEWILD is completed suggests that a special .MDM file is needed, you will be instructed to run wcMODEM at that time. Importing a modem file using F3 results in correct settings being imported into both MAKEWILD configuration screens. Very few changes will need to be made in

Modem Information - Part 1 or *Modem Information - Part 2* if you have selected a correct configuration file. If you suspect you will require a special configuration, you should select STD-2 in the interim.

If you've created your own modem profile from the MAKEWILD Modem definition screen, you may save it as a .MDM file by pressing the F5 key.

NRAM Follow-up

If you selected the NRAM setup, your modem still needs to be programmed to the default settings for *WILDCAT!*. The programming portion of the setup is done after MAKEWILD is completed using the program WCMODEM.EXE which not only sets the nonvolatile RAM (NRAM), but is used for testing and troubleshooting your particular modem interface.

We'll now review each question individually to make certain that they are correct for your setup. Some fine tuning may be necessary.

1. Communications port number : 0

WILDCAT! can use any communications port number available on your system from 0 through 9. For local operation set the port to 0 and no output will be sent to the modem.

2. Communications port IRQ : 00

This is the interrupt line used by the operating system and software to communicate with the serial port, and must be unique for each device in your PC. *No other device may make use of the same IRQ as your communications port.* For most installations, this is not a problem, as DOS avoids conflicts in IRQ assignments for both COM1 and COM2 by default. For this reason, whenever the port number is set to 1 or 2 in question 1 above, the IRQ is set to the standard values of IRQ4 for COM1 and IRQ3 for COM2.

If you are using COM3 or COM4 however, a problem may exist. COM1 and COM3 make use of the same IRQ line (IRQ 4), and COM2 and COM4 make use of another line (IRQ 3). If you are making use of COM3 or COM4 using DOS's default IRQs, you may NOT use COM1 or COM2 with the same IRQ numbers. Duplication of interrupt numbers will cause erratic operation. As an example, if you connect a mouse to a standard COM1 (IRQ 4) you may not set your internal modem to COM3 with IRQ 4. The IRQ for each port may be changed if needed. We strongly suggest that you do NOT change this value unless you have experience with communications addressing and have a solid reason for making such a change.

3. Communications port base address : 03F8

Just as every device in your PC needs to have a unique interrupt request line from the CPU, it also needs a unique port address. Address are expressed as hexadecimal numbers both to DOS and to *WILDCAT!*. Fortunately, the DOS standards for communications ports 1 and 2 are unique. For this reason, whenever the port number is set to 1 or 2 in question 1, the port address is set to the standard values of 03F8 for COM1 and 02F8 for COM2.

If you are using COM3 or COM4, the port values MUST be set to match your communications device or serial port. There is no firm standard although COM3 uses 03E8 and COM4 is assigned 02E8 in the IBM AT. In the PS2 COM3 the addresses are different however. For ports above 4, a unique IRQ and address must be established.

For additional reference information on ports, addresses and IRQs, see *Appendix A - Modems*

4. Determine ringing using : Ring detect

Pressing the SPACE toggles through the three choices for this field. The default using **Ring detect** is usually the most reliable method. In order to do this, *WILDCAT!* watches the status of pin 22 on the modem connector (pin 9 on a 9-pin cable). This is one of the reasons why you must have the appropriate pins connected on your modem cable. If you intend to make use of doors, you are strongly advised to answer by ring detect, and to disable your modem's ability to auto-answer. See the cautions regarding doors for additional information.

The second choice, **Ring Result**, lets you make use of your modem result codes to tell *WILDCAT!* when the phone is ringing. To operate properly you must enter the correct modem result code in the next section, *Modem Setup - Part 2*. Use this choice if your modem cable does not have pin 22 (Ring Detect) connected, or you have other problems using Ring detect. This choice is safe for use with doors as long as modem auto-answer is disabled. *WILDCAT!* will wait for the word RING or whatever result code you indicate.

The third choice is to use your modem to watch for the phone to ring, and to perform the answer function as well. This is the **Auto-answer** choice. Normally this is the least desirable option since *WILDCAT!* is then taken out of the loop of answering the phone.

This choice is *not* desirable since it opens a small but potentially troublesome security issue, especially if doors or external programs are in operation. See the section on doors for a complete discussion of this issue. For auto-answer to be used, either the auto-answer switch on your modem must be set to *on* or you must have the command S0=1 (answer on ring 1) in your initialization string or modem NRAM.

5. Determine baud rate using : Result Code 1

Pressing the spacebar toggles through the four choices for this field.

When set to "Result code 1" *WILDCAT!* continues to monitor the UART while waiting for a modem Connect code. This allows *WILDCAT!* to detect a second ringing condition or loss of carrier, but in some systems has the side effect of losing some of the CONNECT message text. "Result code 2" tells *WILDCAT!* to stop monitoring the UART and to simply wait for a result from the modem. The only disadvantage to "Result code 2" is that a disconnected call must wait the entire 30 seconds to timeout before *WILDCAT!* will recycle. We suggest that you begin by using Result code 1, and switch to Result code 2 if you have problems determining connect rates.

The use of **Result codes** is recommended for both speed and accuracy. In order to operate correctly you must enter the correct modem result code in the next section, *Modem Setup - Part 2*.

The third choice is **CR** (carriage returns or pressing ENTER). This choice means that the caller must enter one or more carriage returns and spaces after connection in order for the system to determine the baud rate. The use of "Result Codes" is highly encouraged for accuracy and speed in completing a connection.

The fourth choice, **DTE**, indicates that the connection rate is always the same as the DTE (data terminal equipment) rate specified in the next question. This choice is used with Packet Switched Networks or PADs. The PAD supplies the standard RS-232 signals to *WILDCAT!* and raises CD (carrier detect) when a PAD caller wishes to connect. *WILDCAT!* monitors for the presence of CD, and makes the connection at the PAD rate specified by the DCE port setting.

6. Initialize port at what baud rate : 2400

This value is changed by pressing the spacebar to toggle through all valid choices. Some modems can step up to match the baud rate of an incoming call while others can only step down. If you are unsure about the modem's capabilities, enter the value that represents the modem's fastest baud rate. If a PAD is used, set this to the PAD rate, usually 9600.

7. Lock DTE at initialization baud rate : N

This choice is provided as an option to help you make full use of the high speed 9600 & 14400 baud modems. It allows you to lock the link between your computer and your modem at a rate higher than the caller's connection rate. Choosing to lock your DTE (data terminal equipment) rate will result in *WILDCAT!* sending all data to *your* modem at the initialized baud rate, regardless of the connection rate. This

allows faster throughput with some modems using hardware error checking, by maximizing data transfer from the computer to modem. An example is the US Robotics HST which functions well with the communication port locked at 19200 baud and allows the modem to control data flow from your modem to the callers modem at the fastest speed possible, sometimes even exceeding the quoted modem speed. Locking the port can cause problems with some doors because the door expects the port to be at the baud rate of the caller rather than at some higher rate. If you do not have a high speed modem, you should *not* lock the baud rate. If a PAD (packet switched network) is used, the rate must be locked. When locking DTE is utilized, you must also use a command to tell your modem that the DTE rate is locked, such as B1 for the US Robotics HST. See the sections on *wcMODEM* and *Appendix A* for complete information.

8. Use CTS/RTS flow control : N

Many modems can make use of the Clear To Send (CTS) and Ready To Send (RTS) signal to tell the other modem when data should be sent, and when to wait. CTS/RTS is used by modems to tell one another when their respective send/receive buffers are full or empty. If your modem supports CTS you MUST enter **Y** to this prompt. Virtually all 9600 baud modems, as well as those supporting MNP/ARQ or other hardware error control make use of CTS/RTS for flow control.

Failure to indicate that CTS is available for modems that support MNP/ARQ results in loss of data during transmission, especially if the communications port is locked at the initialized baud rate.

9. Number of seconds to wait for carrier : 30

This setting indicates how long *WILDCAT!* will wait for a carrier signal (connect) from a caller. The default of 30 seconds is the standard for most modems, and is the recommended setting. Be sure to set the S7 register in your modem equal to or greater than this number, or your modem may hang up before *WILDCAT!* has finished negotiating a connection.

10. Milliseconds before answering : 1000

This delay is the time between ring detection and *WILDCAT!* sending an ATA answer command to the modem to tell it to answer the phone. The default of 1000 milliseconds (one second) is adequate for almost all systems.

11. Milliseconds to lower DTR for hang up : 2000

This delay is the time that *WILDCAT!* holds the Data Terminal Ready (DTR) line low, telling the modem we want to hang up the phone. This method of disconnecting a call (lowering DTR) is an industry standard, and most modems require DTR to be low for at least 50 ms. The default of 2000 (2 seconds) virtually guarantees that the hang up request will be successful. Using DTR is a much more effective and foolproof method than using the AT command set to perform this function.

The modem test program wcMODEM includes tests for the timing of this option and is reviewed in the section on wcMODEM in *Chapter 9*.

12. Milliseconds to delay before prelog : 1000

Some modems delay a short time after answering the phone and establishing a connection to test for various hardware protocols or compression methods. During this delay period the modem stores any incoming characters in a buffer, but may lose information that is sent immediately after carrier is detected. *WILDCAT!* can delay sending its first display file, PRELOG.BBS, for the amount of time specified here. The default of 1000 milliseconds (1.0 seconds) is usually ample to compensate for this delay. If you find your callers are missing some of the PRELOG.BBS display file, or are not receiving the prompt for First Name properly, you may increase the delay so the program will wait a longer amount of time. Try the default of 1000, and if problems develop as indicated increase the value to 2000 ms (2.0 seconds).

13. Milliseconds to wait for result code : 2800

This item controls how long *WILDCAT!* waits for the modem to respond after sending a command. There are many times when *WILDCAT!* sends a command to the modem and expects to receive either a confirmation or an informative response. These include initialization strings, reset strings, and verbal connection codes. The primary need for a configurable delay here is to accommodate modems that take an extraordinarily long time between detecting carrier and sending the connection rate information.

The default of 2800 ms. (2.8 seconds) is adequate for most modems, but some require longer delays. If your status line indicates "Unable to handshake" or "Invalid result code" when a valid connection is made, it could be an indication that you need to increase this value to as much as 6000 - 9000 (6 - 9 seconds), or even longer. The maximum value here is 65535, or 65.5 seconds.

The modem test program wcMODEM includes tests for the timing of this option and is reviewed in the section on wcMODEM in *Chapter 9*.

14. Milliseconds between command strings : 2000

This item controls how long *WILDCAT!* delays between sending multiple commands to the modem. An example is the delay between the reset string and initialization string after each call (if any). The default of 2000 ms (2 seconds) is adequate for most modems. If your modem does not respond with OK on the status line for each command, you may need to increase this value to as much as 3 seconds (3000).

The modem test program wcMODEM includes tests for the timing of this option and is reviewed in the section on wcMODEM in *Chapter 9*.

15 Trigger level for FIFO : 4

This item is only used if *WILDCAT!* detects a 16550 UART chip in your serial port, capable of buffering output. The buffer can hold up to 16 characters, and the trigger level indicates how many characters need to be in the buffer to trigger processing the buffer contents, and then begin buffering a second group of characters.

The number buffered can be 1, 4, 8, or 14, and is changed by pressing the SPACE. The default is 4 characters buffered, which is a good starting point for most systems.

The higher the value, the less processing needs to be done by the I/O channel. We recommend systems under DESQview increase this setting to 8 to minimize processor activity. Slower 8088 based systems may need to reduce it to 4 or lower to prevent lost characters during transfers at high speeds.

```
08-04-93 | Modem Definition - Part 2 | 16:13:29

   1. Verbal code for RING                  : RING
   2. Verbal code for   300 baud            : CONNECT
   3. Verbal code for  1200 baud            : 1200
   4. Verbal code for  2400 baud            : 2400
   5. Verbal code for  4800 baud            : 4800
   6. Verbal code for  9600 baud            : 9600
   7. Verbal code for 14400 baud            : 14400
   8. Verbal code for 19200 baud            : 19200
   9. Verbal code for 38400 baud            : 38400
  10. Verbal code for 57600 baud            : 57600
  11. Modem error correction codes          : ARQ|MNP
  12. Modem on-hook string                  : ATH0
  13. Modem off-hook string                 : ATH1
  14. Modem reset string                    : ATZ
  15. Modem initialization string           :
  16. Modem answer string                   : ATA

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   [F1] Help - [F3] Load .MDM File - [F5] Save .MDM File - [ESC] Exit
```

Modem Definition - Part 2

In order to determine the connection rate and error correction capabilities of each caller, *WILDCAT!* simply watches for the verbal indication sent by the modem. Since all modems are not exactly alike in this regard, this screen allows for customization if necessary. The defaults will work properly for most modems, with slight modification on a few fields.

If you want to check each code against your modem manual, you may do so by locating the list of verbal result codes available.

1. Verbal code for RING : RING

Almost all modems use a form of this word to indicate the phone is ringing. Note that the word RING is a proper choice for modems that have any form of the word RING in their result code, including RINGING and RING DETECTED.

This selection is used if you have opted to determine ringing by **Ring Result** in *Modem Setup - Part 1*. If so, *WILDCAT!* watches the modem until it sends the code entered here, and then proceeds to answer the phone.

2. Verbal code for 300 baud : CONNECT

The code entered here, and in the next 8 questions, is the primary way *WILDCAT!* determines the baud rate of your callers. These entries are only used if you determine baud rate by **result codes**, the default (and most reliable) choice. The actual baud determination is done by the modem, which passes the rate to *WILDCAT!* using these codes.

Almost every modem manual contains a table of result codes in both numeric and verbal format. *WILDCAT!* makes use of the verbal or text codes. This field should contain the text, or a portion of the text, returned when a 300 baud connection is established. The default CONNECT is a widespread standard used by most modems. If your verbal result code is different, enter the correct text here.

3. Verbal code for 1200 baud : 1200

This field should contain the verbal code for a 1200 baud connection. Notice that the default of 1200 is actually only a portion of the full verbal code issued by most modems, CONNECT 1200. If the entire text entered here is contained in the code received, a match is established. In addition, result codes are checked from highest to lowest baud rate, a process that keeps the word CONNECT (our 300 baud default) from matching the higher rates.

4 - 10. Verbal code for xxxxx baud : xxxxx

The choices for 2400 through 57600 baud should be entered following the same logic as the previous responses. If your modem does not support a specific baud rate, you can leave the default entries and the connection result codes will simply not occur.

Multiple baud result codes can be listed in the modem result code fields if they are separated with the | character. For example:

```
6. Verbal code for  9600 :  9600|12000
7. Verbal code for 14400 : 14400|16800
```

11. Modem error connection codes : ARQ|MNP

Error connection codes are sent by modems that have the ability to perform hardware-based error control and auto-correction. These modems indicate when a "reliable" connection is established with another modem having the same error-control mechanism. This type of error correction can be done using several methods. One is the Microcom Network Protocol (MNP) and another is ARQ (Automatic Repeat Request) by US Robotics. Most modems that support MNP/ARQ send a slightly different verbal result code if the connection is made with another MNP/ARQ modem. This type of connection, if supported, allows the modems on either end of the connection to perform error checking internally, allowing the use of fast block oriented protocols written specifically for modems with a "reliable connection." If *WILDCAT!* makes a connection with an MNP/ARQ result code, it assumes that the modems on both ends are capable of supporting file transfers using YMODEM-G and 1K-XMODEM-G. These protocols are very fast and no error checking is performed by the protocol itself.

If your modem supports hardware error correction, enter the text appended to the connection rate result codes when a reliable connection is established. For example, US Robotics adds /ARQ to the connection message and many modems add the letters MNP. You can add additional reliable codes by separating multiple possibilities with the | character. Other possible codes might be V.42 or LAP. If *any* of the items entered here are located anywhere in a valid text result code, a reliable connection will be assumed, and Ymodem-G and 1K-Xmodem-G will be allowed. Check your modem manual to determine which codes, if any, are supported.

If your modem does not support hardware error control, you should leave this field blank.

12. Modem on-hook string : AT H0

Going "on-hook" is an expression meaning "hang up the phone." It is NOT used to hang up after a call, but to turn off a busy signal placed on the line while doing between-call processing, etc. The default of AT H0 is a near-universal standard.

13. Modem off-hook string : AT H1

This string is used whenever *WILDCAT!* needs to "pick up the receiver," with the exception of answering calls. It is sent when the program is terminated with [F10] to place a busy signal on the line, providing you have requested placing *WILDCAT!* off hook when the system is down (another MAKEWILD choice). It is *not* sent when [ALT] [D] is pressed to drop to DOS locally.

Another command you may want to include in this field is M1 or M0, depending on whether you want to turn your modem speaker on or off when *WILDCAT!* is down.

14. Modem reset string : ATZ

Enter the command string that resets your modem to its default settings. This command should almost always be ATZ. It is used between each call to reset the modem to the NRAM defaults (if supported).

15. Modem initialization string :

This command string is sent after each call following the reset string above. *Even if your modem supports NRAM, you may want to enter an initialization string.* The required settings will be stored and executed by the reset string, but not all modems with NRAM are capable of storing the complete settings, and some do not always reset reliably.

If you modem does not support NRAM, this field should contain the commands necessary for operation. These are automatically loaded with the F3 key when a modem configuration file is selected. If you selected STD-1 or STD-2 this line will contain the correct codes. If your modem has its own special configuration file, it will also place the correct codes in this field. A brief explanation of some of the possible commands you may see follows.

M0 ..... Turns off the modem speaker

Q0 ..... Result codes are displayed

E0 ..... Echo result codes to terminal

S0=0 ..... Disable auto-answer by modem and let *WILDCAT!* monitor ring detect

S2=255 ..... Disable +++ as the modem attention string

X1 ..... Extended result codes, needed to send a different result number for connections at each baud rate

&C1 ..... Have carrier reflect reality rather than be forced true all the time

&D2 ..... Have the modem react to the DTR (data terminal ready) line properly. This setting indicates that when the modem sees a lowering and raising of DTR it should go on hook (hang up) and return to command state.

Even if your modem supports NRAM, you may want to enter an initialization string here. Instructions for programming your modem's NRAM using the program WCMODEM.EXE (after MAKEWILD is completed) will be given later in this documentation.

16. Modem answer string : ATA

This string is sent to the modem by *WILDCAT!* when it has observed the phone is ringing, either through monitoring of ring detect (pin 22) or result codes from the modem. In both cases it sends the answer string to the modem to tell it to answer the phone. Almost all modems make use of the default ATA. The only time this string is not used is when auto-answer is in effect. In that case *WILDCAT!* passes all responsibility for ring detect and answering to the modem.

```
08-04-93 | External Protocol Definition | 16:24:11

Ltr   Name          Up .BAT       Down .BAT     Batch
 -   ------------  ------------  ------------    -
 M   Moby Zmodem   MOBYUP.BAT    MOBYDOWN.BAT    Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y
                                                 Y

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[F1] Help - [ESC] Exit
```

External Protocol Definition

External protocols use batch files outside of the *WILDCAT!* program to execute a transfer program written by another company. This section defines the batch file names called for each protocol. Up to 10 external protocols may be defined by completing the desired number of fields.

LTR (Letter)—The LTR defines the key used to select the file transfer for each choice. The obvious choices are phonetic such as H for HS-Link, M for MobyTurbo Zmodem, etc. Letters which conflict with internal file transfer choices are rejected with a popup error window. A common duplication is the use of the letter K for Kermit, which is an internal protocol. If this field is left blank the external protocol is disabled.

Name—Enter the protocol name as you want it to appear in the list of available protocols.

Up.BAT & Down.BAT—These two fields specify the names of the batch files used for Uploads and Downloads. The Up.BAT filename is executed whenever a user asks to upload to your system, and the Dn.BAT is executed when a download is requested.

Batch—Enables or disables the transfer of multiple files in a batch with the current protocol. If the protocol has this capability this field must be set to Y before batch transfers are allowed. This is an advanced feature and is not a part of all external protocols. If set to yes, *WILDCAT!* allows up to 99 filenames to be entered for a single download request, providing the user's daily download count and Kbyte limit are not exceeded.

If you are not quite ready to tackle the setup of external protocols, you may leave this section blank and still have access to *WILDCAT!*'s internal transfer protocols of XMODEM (CRC & Checksum), 1K-XMODEM, 1K-XMODEM-G, YMODEM (batch), YMODEM-G (batch), ZMODEM (batch), KERMIT, ASCII, etc. For details on the setup and use of External Protocols see the *Features in Depth* section.

```
08-04-93 | Main Menu Definition | 16:33:56

      Activity          Ltr          Description                Seq Lev
 ------------------------ -  ------------------------------------ --  ----
 Call message menu        M  [M]............Message menu          1   10  ↑
 Call file menu           F  [F]................File menu          2   10  ▒
 Comment to sysop         C  [C]....Comments to the sysop          3   10  ▒
 Call bulletin menu       B  [B]............Bulletin menu          4   10  ▒
 Page sysop               P  [P]...........Page the sysop          5   100 ▒
 Show welcome screens     I  [I]...Initial welcome screen          6   10  ▒
 Call questionnaire       Q  [Q]............Questionnaire          7   100 ▒
 Find active user         V  [V]............Verify a user          8   10  ▒
 Change user settings     Y  [Y]............Your settings          9   10  ▒
 Board information        S  [S]........System statistics          10  10  ▒
 List user log            U  [U]............Userlog list          11  10  ▒
 Door menu                D  [D].....................Doors          12  100 ▒
 Call newsletter          N  [N]...............Newsletter          13  10  ▒
 Goodbye & logoff         G  [G].........Goodbye & Logoff          14  10  ↓

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                          [F1] Help - [ESC] Exit
```

Main Menu Definition

This screen lists the menu choices for the main menu. Since there are more than 13 possible choices, a scrolling screen window is used for all menu displays. You will notice a small down arrow on the right side scroll bar indicating more choices are available. You may view these additional choices by clicking your mouse on the arrow, by pressing CTRL PG DN, or by pressing the down arrow while on the bottom line. An up arrow may also appear if there are additional choices above the top line that have scrolled off the screen.

WILDCAT! will permit a lot of flexibility in its run-time configuration. This includes the menu structure, which may be completely customized. In this screen you will specify the names of the various menu choices, as well as the keys used to activate those choices. Along with this power and flexibility comes an area for possible confusion, so the screen above will be elaborated upon in the following paragraphs. The five main screen sections represent the following:

Activity

This text field describes the actual function of the menu choice within the program. Each describes what is *actually* happening inside the code during the procedure that is listed, and they are never seen except when running MAKEWILD. They are listed here for your information so that you may decide the menu name and description that you will give to that specific menu function. Further details of each function are contained in the section *Features in Depth* later in the manual. Look ahead to that section if the brief "activity" description given here does not adequately explain what the menu choice actually "does."

Call Letter

The call letter for a particular option is definable. It represents the key a user must press on the keyboard to activate that menu choice. The call letter may be any ASCII character that normal keys will produce. In addition, the Call Letter does NOT have to agree with the first letter in the description. For example, you might elect to change the call letter for [I]nitial Welcome Screen from "I" to "W" and then change the related description to Initial [W]elcome Screen, or just [W]elcome Screen. MAKEWILD will not allow you to leave the menu screen with duplication of call letters.

These call letters are active for dynamic menus *and* .BBS and .SCR menus. Your text menu files *must* have call letters that match the call letters entered here.

Description

The description is what you elect to call the activity on the dynamic menus as they are displayed to the screen. For example, you are free to change the [N]ewsletter call letter to "S" and redefine the associated description to "[S]ystem News" or "News on system." However, notice that there now exists a conflict with two "S" call letter options, the other still being used for [S]ystem Statistics. MAKEWILD will double-check for potential conflicts in this area, but you are cautioned to work out your call letters and descriptions properly. The use of brackets is optional in the description line, but for clarity, you are encouraged to use some means of highlighting the user's screen options.

Again, these descriptions will only be used for the dynamic menus generated by *WILDCAT!*. If you are not making use of dynamic menus, you will need to enter the descriptions in your MAIN#.BBS or MAIN#.SCR files, discussed later in this manual. Even if dynamic menus are disabled, having the correct descriptions here is recommended since the dynamic menus are used if a text menu file cannot be located for some reason.

Seq (Sequence)

This option determines (1) the order in which the Description is presented on the dynamic menu screen when the dynamic menus are being used, and (2) the sequence of characters on the command line. Notice on the sample screen that the [M]essage menu and [F]ile menu are numbers 1 and 2, respectively. Users will use these options more often than the others indicated. For this reason, they have been given these sequences. You may change them to any sequence you wish, but ensure that no two commands have the same sequence number. MAKEWILD will not allow you to leave the screen with duplication of sequence numbers.

Lev (Level)

Each security profile (established later) references a single **Menu Access Level** that controls which menu choices are available to users assigned to that security profile. For example, you may establish a NEWUSER security profile and assign them Menu Access Level 5. This would indicate they could execute any menu option with a level assignment of 5 or below.

Enter the minimum access level number required to access each menu option in this field. All users in a security profile with that level *or above* will be able to perform the menu function. If dynamic menus are being used, callers will only be shown the choices to which they have access by level. In the screen above, if the level for the [N]ewsletter option were raised to a value of 10, a user assigned to a security profile with a menu access level of 5 would not only *not* be able to access the newsletter, he would not even *see* the option on his menu. The F2 key activates a pop-up pick-list of all Menu Access Level assignments.

If dynamic menus are not implemented, the sysop must use the access rights on this screen to create the various MAIN#.BBS & .SCR files containing the correct menu choices for each security profile.

Caution: Regardless of the actual call letter and description given, be especially careful with the level of the "Call Sysop Menu" activity. This function should be reserved for system operators *only*.

```
08-04-93          Message Menu Definition                    17:00:49

      Activity              Ltr          Description                Seq Lev
 ------------------------   -   ------------------------------------ --  ----
 Call main menu             Q   [Q]........Quit to main menu         1   10  ↑
 Join conference            J   [J]..........Join conference         2   10  ▒
 Read messages              R   [R]............Read messages         3   10  ▒
 Search messages            S   [S]......Search for messages         4   10  ▒
 Enter a message            E   [E]......Enter a new message         5   10  ▒
 Delete message             K   [K]...........Kill a message         6   10  ▒
 Goodbye & logoff           G   [G].........Goodbye & logoff         7   10  ▒
 Help level                 H   [H]...............Help level         8   10  ▒
 Call help file             ?   [?]............Command help         9   10  ▒
 Call file menu             F   [F]................File menu        10   10  ▒
 Call MAIL.BAT              T   [T]..Tomcat offline msg door        11   10  ▒
 Conf scan/read select      U   [U]....Update conf scan/read        12   10  ▒
 Call sysop menu            1   [1]...............Sysop menu        13   1000▒
 DOS hook 1                 X   [X]...............DOS hook 1        14   1000↓

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                          [F1] Help - [ESC] Exit
```

Message Menu Definition

The screen above is used to define the options available when a user chooses the [M]essage menu choice from the main menu. The editing options that exist here are the same as the main menu in the previous screen. This screen may also scroll within the editing window.

Let's use the first option as an example, just to further illustrate the menu options.

Before:

```
Call The Main Menu Q      [Q]uit to the Main Menu      1      5
```

After:

```
Call The Main Menu M      Return to [M]ain Menu        2      10
```

Notice what has happened. We have changed the key letter that returns the user to the main menu from "Q" to "M", and moved the brackets prompting for the option in the description. In addition, the location on both the message menu screen and command line is now repositioned. Finally, we've also created a problem. If this

caller happens to be assigned to the NEWUSER security profile with a menu access level of 5, we have just permitted that user INTO the message area, but prohibited any means of exiting back to the main menu. The user's only options now, other than reading the messages over and over, are to either hang up or log-off the system via the [G]oodbye option.

Using the power of the menu access levels in this manner can be very useful if thoughtfully implemented. The last part of this example reflects no such wisdom, however. All you've accomplished is to "paint the user into a corner." This is not the best way of encouraging new users to call your system! Be careful!

```
08-04-93 |                File Menu Definition                | 17:02:23

      Activity          Ltr          Description                Seq Lev
 ------------------------ -  ------------------------------------ --  ----
 Call main menu           Q  [Q]........Quit to main menu        1   10  ↑
 Info on a file           I  [I]....Information on a file        2   10  ▒
 List available files     L  [L].....List available files        3   10  ▒
 Download file            D  [D].......Download a file(s)         4   10  ▒
 Upload file              U  [U].........Upload a file(s)         5   10  ▒
 New file search          N  [N].........New files search         6   10  ▒
 Search files             S  [S].........Search for files         7   10  ▒
 Personal file stats      P  [P].Personal file statistics         8   10  ▒
 Call transfer help       F  [F].......File transfer info         9   10  ▒
 Goodbye & logoff         G  [G].........Goodbye & logoff        10   10  ▒
 Help level               H  [H]...............Help level        11   10  ▒
 Call help file           ?  [?]............Command help         12   10  ▒
 Call message menu        M  [M]............Message menu         13   10  ▒
 View compressed file     V  [V]...View a compressed file        14   10  ↓

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                          [F1] Help - [ESC] Exit
```

File Menu Definition

By now you should be comfortable with the functions of the Activity, Call Letter, Description, Sequence Numbers, and Menu Access level parameters. If not, refer to the main menu definition screen for a review. Meanwhile, let's explore another area of *WILDCAT!*'s power by using this screen for another example.

Suppose you are assigning all new users a default security level profile name NEWUSER, which has a menu access level of 5. Further suppose you wanted your system to be "friendly" enough to allow the new user access to all options in the FILES area, except the ability to actually upload and download files until the user is validated and upgraded by the system operator to the security profile REGISTERED.

What changes to the above example screen would be required?

Simply change the access levels for the "D" and "U" options to a value higher than 5. Of course, the [F]iles section in the Main Menu Definitions should be set to 5 to allow the user access to this menu in the first place.

```
08-04-93 |                Sysop Menu Definition                | 17:04:03

      Activity          Ltr          Description                Seq Lev
 ------------------------ -  ------------------------------------ --  ----
 Call main menu           Q  [Q]........Quit to main menu        1   10  ↑
 Drop to DOS              D  [D]..............Drop to DOS        2   1000
 Event management         E  [E].........Event management        3   1000
 Edit user database       U  [U].......User database area        4   1000
 Help level               H  [H]...............Help level        5   1000
 Goodbye & logoff         G  [G].........Goodbye & logoff        6   10
 List activity log        A  [A].....Activity log listing        7   1000
 Delete activity log      K  [K]....Kill the activity log        8   1000
 Edit file database       F  [F].......File database area        9   1000
 Database status          S  [S]......Status of databases        10  1000
 Purge deleted mail       P  [P].......Purge deleted mail        11  1000
 Node management          N  [N]..........Node management        12  1000
 Call help file           ?  [?]............Command help        13  1000
 Call message menu        1  [1]............Message menu        14  1000↓

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                          [F1] Help - [ESC] Exit
```

Sysop Menu Definition

All of the editing options affecting other menus are active in the Sysop menu.

A caution was issued back in the main menu options to always set the [1] Sysop Menu (or whatever description you've assigned to this option) to a value higher than any other access level. Notice that all the options in the Sysop menu have a access level of 1000. Regardless of whether other trustworthy users are granted "Co-sysop" access to the system, *only the actual system operator should have absolute control over all parts of the system!*

```
08-04-93 | Security Profile Definition | 14:47:50

        Profile    Menu      Profile    Menu      Profile    Menu
        ---------  ----      ---------  ----      ---------  ----
        NEWUSER      1       FULLUSER     10      SYSOP      1000

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[F1] Help - [INS] Add - [DEL] Delete - [F3] Copy - [F4] Global - [ESC] Exit
```

Security Profile Definition

Since *WILDCAT!* supports up to 1,000 unique security profiles, the number of list items on this screen is dynamic, and begins with only three example profiles which you should alter as desired. You can add as many additional profiles as desired.

To create a new security profile item, press the [INS] key, and to delete an existing profile, highlight it and press [DEL].

When naming profiles, be aware that if you want to change an existing security profile name (one that is already assigned to users) you must first make provisions to change the profile in each of the user records. **You may *not* simply change the name of a security profile or you create a situation where users have a profile name in their record that doesn't exist**. Several utility programs allow you to move users as a group from one profile to another including *wcPRO*.

As is the case with all list items, you must highlight the item desired and press [ENTER] to modify any information. Like the conference definition, security profile definition is divided into three screen areas: protocol access, pop-ups and miscellaneous.

Protocol Access

You have the option of enabling or disabling each internal protocol supported by *WILDCAT!*. In addition, you can extend or withhold support for external file transfer protocols for each profile. This might be used to limit some users to standard internal protocols while extending externals and Kermit only to those with need for them. In addition, enforcement of time limits is limited in external protocols and may affect operation of hard events.

```
                         EDIT SECURITY PROFILE

Security profile name NEWUSER

      PROTOCOL ACCESS
 Ascii enabled                Y
 Xmodem enabled               Y
 Xmodem-Crc enabled           Y
 Xmodem-1k enabled            Y
 Xmodem-1k/G enabled          Y
 Ymodem enabled               Y
 Ymodem/G enabled             Y
 Zmodem enabled               Y
 Kermit enabled               Y
 External protocols enabled   Y

          POPUPS
 Node access
 Door access
 Conference access
 Upload file area access
 Download file area access

          MISCELLANEOUS
 Menu access level          1
 Menu display set           1
 Daily time limit           30
 Maximum logon time         999
 Maximum up/down ratio      0
 Maximum daily downloads    9999
 Maximum daily download k   9999
 Upload compensation        0
 Verify birthday calls      0
 Verify phone calls         0
 Allow upload overwrites    N
 Fast login enabled         N
 Download warning action    Ignore
 Sysop access               No
 Expire profile name
 Security display file
```

Pop-Ups

These are all examples of pop-up pick-list items. Each security profile can allow or restrict access to each node (in a multi-node system), each door, each conference, and access to uploads and downloads in each file area. This is the main method of controlling user rights on the system. Move the cursor to this field and press ENTER (or click with the mouse) to pop-up a pick-list of the available items.

Only items marked with the selection dot will be available to users in this security profile. Toggle the status of the selection dot by pressing the SPACE or clicking with the mouse, and move the selection bar up and down using the arrow keys. Remem-

ber, all pick-lists support [ALT] [C] to Clear all toggles and [ALT] [S] to set all. In addition, function keys [F7] and [F8], or the WordStar block mark commands [CTRL] [K] [B] and [CTRL] [K] [K], can be used to mark groups of items for set or reset.

Node access—The pick-list will reflect the number of nodes supported by your version of *WILDCAT!*. This item can be used to reserve some lines in a multiline system for registered callers while others are open to all users.

Door access—This pick-list determines which doors can be entered by callers assigned to this profile. Toggle the selection dot on for any door to be available. This item can also be set from the Door Definition screen using the [F2] key in that area.

This item is the system-wide control for doors. If an individual conference is to have only a subset of the entire number of doors available, it must have a separate door menu, configurable by having a different display file path for that conference.

Conference access—This item determines which conferences may be joined or scanned by callers assigned to this profile. If a caller does not have access to a conference, no access to the conference is allowed and messages in that conference may not be read. This item can also be set from the Conference Definition screen using the [F2] key in that area.

Upload file area access—This item determines which file areas are available for uploads from callers assigned to this profile. Uploads will be limited to these areas only. This item can also be set from the Conference Definition screen using the [F2] key in that area.

Download file area access—This item determines which file areas are available for downloading files, for callers assigned to this profile. The downloading of files from allowable areas is possible from any conference, even if the file area is not associated with the conference. This feature allows marking files in numerous conferences and requesting a download of all marked files from any conference location. This item can also be set from the Conference Definition screen using the [F2] key in that area.

Miscellaneous

Menu access level—This numeric entry determines which menu selections are accessible to a user assigned to a specific security profile. During menu definition you established numeric values for each menu choice for each of the four primary menus within *WILDCAT!*. The numbers associated with a menu option represent the minimum value required to execute that menu function. For example, if the access level for the File Menu choice "Download a file" is set to

15, then only users who are assigned to security profiles with a number of 15 or higher in this field will be allowed to download. Menu access levels can be any number from 1 to 9999. Refer to the assignments made in your menu screens.

Menu display set—This entry determines which custom ANSI or ASCII text-based menus are presented to the callers assigned to a security profile. This field accepts any character that is valid in a DOS filename, including all alphanumeric characters and punctuation, unless excluded by DOS. Before going on, let's review how *WILDCAT!* determines what menus a caller receives when needed.

WILDCAT!'s menu display system operates on a very simple principle. When a menu needs to be displayed to a caller, *WILDCAT!* first looks for an ANSI-coded custom menu file created by the sysop ending in .SCR (only for callers with color turned on). If a menu file ending in the extension .SCR is not found or if the caller does not have color turned on, it looks for a custom ASCII text file ending in .BBS. If that file is not found, it dynamically generates menus to the caller, sending the text in MAKEWILD for the menu choices to which access is allowed.

When dynamic menus are used (no .SCR or .BBS files found), users only see menu choices to which they have access by the menu access level assigned in the previous question. However, to correctly represent the various combinations of menu choices in a text file, a number of different menus may be required. For example, one security profile may allow access to the Message Menu choice to Read messages but disallow Entering new messages, while another allows Entering and Reading, but not Killing a message. In addition, all functions will probably be available to the Sysop profile. In this case, we have need for 4 different custom Message Menu files. *WILDCAT!* handles this situation by allowing you to create multiple menu files for each of the Main, Message, File, and Sysop menus. The filenames for different menus simply append the character entered in this field as an identifier, i.e., MAIN1.BBS, MAIN5.BBS, MAINA.BBS or even MAIN$.BBS.

The *Menu display set* field here allows you to assign a character to designate which menus sets will be associated with each security profile. Valid characters include any allowable DOS filename character. If numbers are used they have absolutely no relationship to Menu access level. The characters only represent identification values for loading specific menu files. Information on menu file creation is contained later in this manual in the section *Display Files*.

Daily time limit—Indicates the maximum login time allowed during a 24-hour calendar day. This amount of time may be consumed during several logon sessions, but may not be exceeded during a day.

Maximum logon time—Indicates the maximum login time during a single connection session. Multiple sessions may be made up to the Daily time limit, but none may exceed this value on a per-session basis.

Maximum up/down ratio—Controls the ratio of downloads to uploads that must be met. For example, if a ratio is set to 20, a caller could download 20 files without uploading any. Starting with the 21st download the caller would be advised that the download/upload ratio has been exceeded. The display file RATIO.BBS is sent to the caller and may be used to explain your ratio requirements. Once the ratio has been exceeded, further downloads may be denied or allowed, depending on the answer to the question regarding Download warning action.

Maximum daily downloads—Controls the number of files that may be downloaded during a 24 hour calendar day. Values from 0 to 9999 may be entered. A value of 65535 in this field allows unlimited downloads. The display file DLIMIT.BBS is sent to the caller, and further download may be allowed or denied depending on the answer to the question below regarding Download warning action.

Maximum daily download K—Controls the number of kilobytes that may be downloaded during a 24 hour calendar day. Values from 0 to 65535 may be entered. Additional downloads are prohibited if the size of a file requested, when added to the current daily download kbyte count exceeds this number. The display file DKLIMIT.BBS is sent to the caller, and further download may be allowed or denied depending on the answer to the question regarding Download warning action. The maximum of 65535 allows almost 64MB per day.

Upload compensation—In order to encourage uploads, some systems grant a time bonus to users who contribute to the file database. The default of 0 indicates that no bonus is given. If the value here is set to 2, the caller receives an upload credit of twice the transfer time. The time credit is added to the user's account but is only available for the call in which the upload was made. For example, when set to 2 to 1, if a file takes 5 minutes to upload, the caller would receive 10 extra minutes on-line during the call. Setting upload compensation to 1 will compensate the caller for the time of the upload, indicating that upload time is not deducted from available time online.

Verify birthdate calls—Verification of birthdate can be used as an additional security device to verify the users identity. Following the number of logons specified in this field, the caller is prompted to enter birthdate in addition to first name, last name and password. The birthdate is then checked for validity against the user's record, and if the response is not correct he is forced to enter a message explaining the inability to confirm his birthdate. After completing the message, the caller is either allowed to continue with the logon, or is denied access to the BBS, depending on your response to the *Security Information* section question "Logoff for failed birthdate or phone." Set this item to 0 to disable verification.

Verify phone x calls—Verification of phone can be used as an additional security device to determine whether a caller is really the user claimed. Following the number of logons specified in this field, the caller is prompted to enter phone number in addition to first name, last name and password. The phone number is then checked for validity against the user's record (voice phone), and if the response is not correct the caller is forced to enter a message explaining the

inability to confirm phone number, After completing the message, the caller is either allowed to continue with his logon, or is denied access to the BBS, depending on your response to the *Security Information* section question "Logoff for failed birthdate or phone." Set this item to 0 to disable verification.

Allow upload overwrites—Controls whether users in this security profile can overwrite files which they uploaded on a previous call. If set to Y, it allows overwriting only those originally sent by the user. Only users with sysop access can overwrite files uploaded by anyone on the system.

Fast login enabled—If set to Y, allows all users in this security profile to perform a login that skips directly from the user name prompt to the main menu or mail door. It is triggered by a login name beginning with the asterisk or exclamation character, i.e.,

```
*Rick Heming Password
```

The asterisk option, if allowed, skips all hello screens, all bulletins (even if forced), all questionnaires, quotes, all display files and all extra verifications such as birthdate and phone, placing the user at the main menu. The exclamation point option immediately loads the mail door.

Download warning action—This field controls how a caller is treated when he exceeds the download ratio previously entered. The three choices are changed by pressing the SPACE. **Ignore** lets the caller exceed the ratio and takes no action. **Warning** sends a notice to the caller, or the display file RATIO.BBS if it exists in the display file path. This option does not prevent further downloads, but continues to send the warning notice with every download until the ratio is corrected. The third choice **Disable** sends the same warning message as above, but also disables further downloads until the ratio is brought within limits.

Sysop access—This field grants sysop rights on the system. There are three choices, which are changed by pressing the SPACE. **No** is the default and indicates the users assigned this profile will have no special sysop powers. The second choice, **Yes**, indicates all users assigned the security profile will have sysop access. The only limitation is that they cannot see user passwords when in the user database, and cannot add to or create users in the security profile designated as Master Sysop. The third choice is **Master** indicating that all users assigned this security profile can do everything, including the ability to view all user passwords and add other names to the profile designated as Master sysop.

It is important to note that even though non-master sysops cannot view user passwords in the user database, they *can* change the passwords or even delete the user. The limitation on viewing passwords will prohibit the sysop from logging on as a user or compromising a user's password without making changes.

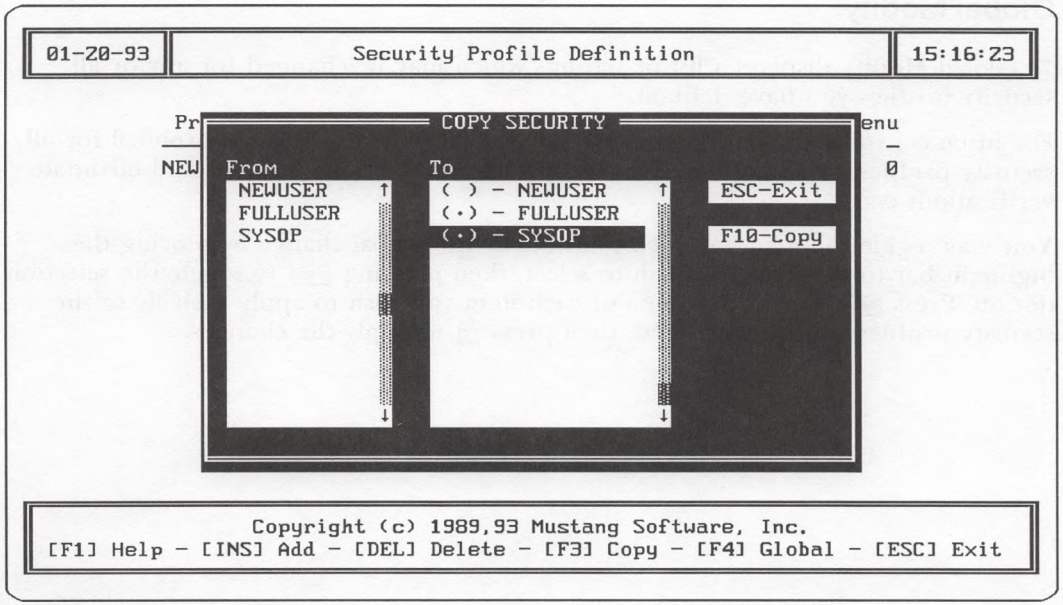
Expire profile name—This field defines the security profile name assigned after the user's expiration date passes. *WILDCAT!* checks the caller's individual expiration date on every logon. If a caller is within 60 days of expiration a message is sent in the form of the display file WARN60.BBS which can be used to prompt for renewal or whatever is appropriate for the system. Within 45 days the file WARN45.BBS is displayed, within 30 days the file WARN30.BBS is displayed, and within 15 days the file WARN15.BBS is sent. On the user's first call after the expiration date his user record is changed to the access rights of the security profile name entered here.

Security Display File—The filename entered here is sent on every call to all users assigned to this security profile. Any filename desired may be used, and the file must be placed in the Display file directory.

When you have completed all items, the total security profile setup is automatically saved when you press [ESC] to return to the main screen.

Adjustments

Multiple Security Profile Definitions



Once a single profile has been created, you can easily create duplicates by using the F3 **Copy** function. It is often easier to create one profile and clone it multiple times, following up with minor modifications.

This feature operates from the main security profile definition screen only, and requires a minimum of two profile names to be activated. In order to use the copy profile option you must first generate a security profile name for each profile desired by pressing INS and filling in the profile names desired. When ready to copy profiles, press F3.

The left pick-list displays a list of all security profiles, and is the cursor location when this feature is invoked. Use the arrow keys or mouse to move the highlight bar over the profile to be copied **From**.

When you have highlighted the source profile, press ⇥ (tab) or click with the mouse to move the selector highlight bar to the **To** pick list. SHIFT ⇥ (tab) moves backwards to previous pick-lists.

When in the destination pick-list, again use the cursor keys or mouse to move the highlight bar over the profile desired. Press the SPACE to toggle the selection dot for profiles you want to copy to and press F10 or click on the Copy button to perform the copy. After completing a copy, all settings from the **From** profile are duplicated for all **To** profile records.

Global Modify

F4 Global Modify displays a list of settings which may be changed for any or all security profiles you have defined.

For instance, you may wish to enable or disable an internal transfer protocol for all security profiles, or change the frequency with which phone number and birthdate verifications occur.

You may toggle the item you wish to affect by the global change by moving the highlight bar to the item you wish to select, then pressing SPACE to toggle the selection dot on. Press ENTER to edit the value of each item you wish to apply globally to the security profiles you have selected, then press F10 to apply the changes.

```
01-20-93          Security Profile Definition                15:18:36
                GLOBAL SECURITY PROFILE MODIFY
        Security profiles to modify :
                        Miscellaneous
 ( ) - Menu access level            : 0
 ( ) - Menu display set             :
 (•) - Daily time limit             : 0
 (•) - Maximum logon time           : 0
 (•) - Maximum up/down ratio        : 0
 (•) - Maximum daily downloads      : 0
 (•) - Maximum daily download k     : 0
 (•) - Upload compensation          : 0
 ( ) - Verify birthday calls        : 0
 ( ) - Verify phone calls           : 0
 ( ) - Allow upload overwrites      : N
 ( ) - Fast login enabled           : N
 (•) - Download warning action      : Ignore
 ( ) - Sysop access                 : No
 ( ) - Expire profile name          :
 [SPACE] Toggle - [ENTER] Edit - [F10] Global modify - [ESC] Exit
[F1] Help - [INS] Add - [DEL] Delete - [F3] Copy - [F4] Global - [ESC] Exit
```

Since many of the items selected have popup menus related to them, you may edit each popup by pressing [ENTER] on the item you wish to modify globally. You may edit or toggle each item on the popup. The options are SET, which will turn on access to the item for each conference or profile defined; CLEAR, which turns off access to each item, or IGNORE, which leaves the current setting unchanged. Press [ESC] to return to the main Global Modify menu.

```
01-20-93 |                File Area Definition                | 15:22:39

Area          Description                Area          Description

  1 - BBS Advertisements                   2 - Beta Test area - S (Private)
  3 - Communications                       4 - DOORS - may expire or need key
  5 - Editors                              6 - DESQview Files & Info
  7 - Generic Sysop Utilities              8 - WILDCAT! "S" Version Files
  9 - Net & Echomail Files & Info         10 - Text Files & Information
 11 -                                     12 -
 13 -                                     14 -
 15 -                                     16 -
 17 -                                     18 -
 19 -                                     20 -
 21 -                                     22 -
 23 -                                     24 -
 25 -                                     26 -

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       [F1] Help - [F2] Edit Access - [F3] Copy - [ESC] Exit
```

File Area Definition

Since *WILDCAT!* supports up to 1,000 different file areas, this screen makes use of **pop-up windows**. As mentioned in the *Introduction* section, this term refers to a screen field that is used to open up a window with additional entry fields or selection items.

The main screen shows each file area as a numbered item in a full screen list, with 28 list items displayed on the screen at one time. If more than 28 file areas exist, the mouse or arrow keys scroll the screen to access others. The number of file areas available in this list coincides with the number entered in *General Information - Part 1*.

In order to modify items in this list you must highlight the item desired and press [ENTER]. A pop-up window is then displayed containing several additional fields for each file area. This window allows you to enter the Area Name, the Area Path, and up to three Alternate Paths.

Name & Path Definition

WILDCAT! allows you to group your files available for download by areas or categories, with the actual files for each category stored in different subdirectories on your hard disk. This screen must contain every file area available in your BBS. Access to individual areas is controlled by a combination of each caller's security and which conferences are active. For now simply create a file area for every group of files to be made available anywhere on your BBS.

```
01-20-93 |                File Area Definition                | 15:23:15

Area          Description                  Area          Description
----  ------------------------------------ ----  ------------------------------
  1 - BBS Advertisements                   2 - Beta Test area - S (Private)
  3                          FILE AREA 1                                  key
  5
  7   File area name BBS Advertisements
  9   File area path C:\WC30\AREA1\
 11
 13                          ALTERNATES
 15     Alternate path 1
 17     Alternate path 2
 19     Alternate path 3
 21
 23
 25 -                                    26 -

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       [F1] Help - [F2] Edit Access - [F3] Copy - [ESC] Exit
```

The file area names should describe the files contained in each subdirectory. The file area name is a text field used as a header whenever files in the area are displayed to a caller. Common area names make reference to the types of files in the area, such as Communications, Word Processing, etc., but could also reflect other criteria such as the name of a group with private access to the area, such as Kemp Co. Files.

The area path represents the physical location of the files on disk. In our examples we have located all files in subdirectories below the main C:\WC30 directory. This makes tracking files easier since everything concerning the BBS is in the same area. You may place directories anywhere you wish, including any additional hard drives accessible by your system. You should use specific full path names from the root directory, including a drive identifier, to identify all locations.

```
C:\WC30\UPLOADS\
```

You should not duplicate path names when making area assignments. Each area path should be unique. Duplicating a path assignment results in file listings appearing in multiple areas when the [T]ext search option is used, since WILDCAT! first checks the disk paths for files and then checks the database to determine if the file can be displayed.

MAKEWILD automatically adds the \ to the end of any path that omits it, *unless* the path is a single drive letter referring to a root directory. All single drive letters alone, followed by just a colon (M:) are stripped of the backslash character (again automatically) to allow assigning drive letters to subdirectory names under either DOS or using a network mapping scheme. The general rule is to let MAKEWILD determine when the \ is needed. This note is simply for your information in the event you notice that the backslash appears on some file paths and not others.

MAKEWILD checks every path specified on this screen when your configuration is saved at exit. A warning is issued if the path does not already exist and you will be offered a choice of creating the path or ignoring the warning. For proper operation, the path *must* be created prior to using *WILDCAT!*. For additional information on setting up file paths, consult your DOS manual.

The alternate paths are used to point to additional directories to be scanned for the files listed in each file area. Up to three alternate paths may be assigned, and can be useful if files for a particular file area cannot be kept in one location on disk. Use alternate paths only when absolutely necessary, since all paths are checked when a search is initiated. Avoid duplication of filenames in multiple paths, and limit files to those available in the *WILDCAT!* file database for fastest response times.

When file area definition is completed for an area, press [ESC] to save your changes and return to the main screen.

When completed, this screen should contain *all* file areas available in the entire system. Later in MAKEWILD, you will have the opportunity to indicate which file areas are available in each conference and which security profiles can access which areas.

Adjustments

Edit Access

You may notice that additional function keys are available for use on the file area definition screen, including F2 **Edit Access** which displays a view of related configuration items. F2 will not operate until all related items have been configured, and is designed to facilitate changes, reviews, and adjustments *after* configuration is complete.

```
01-20-93 |                File Area Definition                | 15:24:26

 Area          Description          Area          Description
                         FILE AREA 1 ACCESS

 Upload Security      Download Security    Conference Access
  ( ) - NEWUSER        ( ) - NEWUSER        (•)   0 - Private E-Mail
  ( ) - FULLUSER       (•) - FULLUSER       (•)   1 - General Public Messa
  (•) - SYSOP          (•) - SYSOP          (•)   2 - Political Debate
                                            (•)   3 - Alias Conference
                                            ( )   4 -
                                            ( )   5 -
                                            ( )   6 -
                                            ( )   7 -
                                            ( )   8 -
                                            ( )   9 -

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        [F1] Help - [F2] Edit Access - [F3] Copy - [ESC] Exit
```

When your BBS configuration is completed and you have defined all File Areas, Conference Definitions, and Security Profiles, you can highlight a file area and use the F2 Edit Access key to adjust the relationship between the three items. If you are reading this during the initial installation, skip ahead to the next section now.

Notice that when F2 is activated the screen displays three pick-lists with selection dots. Use the ⇆ (tab) and SHIFT ⇆ (tab) keys to move from list to list. The left pick-list displays a list of security profiles, and uses a selection dot to mark those who have **Upload** access to the file area being reviewed. This screen is a great way to double-check that file areas are not erroneously being made available to security profiles.

Move to the center pick-list using [TAB] (tab) to review which security profiles have **Download** access in the current file area. Again the selection dot is used to denote access, and can be changed by pressing the [SPACE] or clicking with the mouse.

The third pick-list displays all **Conferences** defined on the system, and identifies the conferences that can list the current file area. A file area *must* be associated with a conference in order for the files to be listed by *anyone* in that conference. The ability to list the file area is controlled by security profile. If a file area is not associated with a conference, no *listing* of files in that area will be allowed in the conference.

Since file area access is actually controlled by each security profile, a user can have access to files which cannot be listed in some conferences. Note that a download request will be accepted if the user has access to the requested file *in any other conference*, even though they are not listable in that conference. This feature allows a user to download any files available to him from any conference on the system, even though some may have limited file access for other security profiles.

When your changes to the screens are correct, save them by pressing [ESC] and return to the previous screen.

Copy

Once a single file area has been created, you can easily create duplicates by using the [F3] Copy function. It is often easier to create one configuration and clone it multiple time, following up with minor modifications.

[F3] operates from the main file area definition screen only. In order to use the copy file area option you *must* first generate a file area name for each file area. Simply highlight an empty file area and press [ENTER], and fill in the file area name. Press [ESC] to save the name with all the default values.

Repeat this process of entering the file area names until the desired number of file areas are defined, and then press [F3] to display the file area copy screen.

```
01-20-93 | File Area Definition | 15:25:09

                    COPY FILE AREA

From Area                    To Area
    1 - BBS Advertisements ↑  ( )   1 - BBS Advertisements ↑   ESC-Exit
    2 - Beta Test area - S    (•)   2 - Beta Test area - S
    3 - Communications        (•)   3 - Communications         F10-Copy
    4 - DOORS - may expire    (•)   4 - DOORS - may expire
    5 - Editors               (•)   5 - Editors
    6 - DESQview Files & In   (•)   6 - DESQview Files & In
    7 - Generic Sysop Utili   (•)   7 - Generic Sysop Utili
    8 - WILDCAT! "S" Versio   (•)   8 - WILDCAT! "S" Versio
    9 - Net & Echomail File   (•)   9 - Net & Echomail File
   10 - Text Files & Inform   (•)  10 - Text Files & Inform
   11 -                     ↓  ( )  11 -                     ↓

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[F1] Help - [F2] Edit Access - [F3] Copy - [ESC] Exit
```

The left pick-list displays a list of all file areas, and is the cursor location when F3 is invoked. Use the arrow keys or mouse to move the highlight bar over the file area to be copied *From*. Notice that the file area name changes from black to white when selected indicating which file area is being used for the source.

When you have highlighted the source file area, press ⇆ (tab) to move the selector bar to the *To* pick-list. When in the destination pick-list, again use the cursor keys to move the selection bar over the file area desired. Press the spacebar or click the mouse to toggle the selection dot on for each file area you want to copy.

When your setup is correct, press F10 or click on the Copy button to perform the copy operation. After completing a copy, all settings from the *From* file area are duplicated in all selected file areas in the *To* file area pick-list, except the name field.

```
01-20-93 | Conference Definition | 15:25:20

  #        Description          #        Description
  0 - Private E-Mail            1 - General Public Messages
  2 - Political Debate          3 - Alias Conference
  4 -                           5 -
  6 -                           7 -
  8 -                           9 -
 10 -                          11 -
 12 -                          13 -
 14 -                          15 -
 16 -                          17 -
 18 -                          19 -
 20 -                          21 -
 22 -                          23 -
 24 -                          25 -

        Copyright (c) 1989,93 Mustang Software, Inc.
[F1] Help - [F2] Edit Access - [F3] Copy - [F4] Global - [ESC] Exit
```

Conference Definition

Since *WILDCAT!* supports up to 1,000 different conferences, this screen also makes use of a **pop-up window**. Each conference appears as a numbered item on the screen, with 28 items displayed on the screen at one time. If more than 28 conferences exist, the mouse, arrow keys, CTRL PG UP and CTRL PG DN keys will scroll the screen to access others. The number of conferences available in this list coincides with the number entered in *General Information - Part 1*.

Note: Conference numbers begin with 0 rather than 1 only to maintain a numbering scheme which matches other conference-based programs. We fully realize that humans do not begin counting with the number 0, but we feel it is necessary to maintain parity with the majority of mail networks using numbering schemes beginning with zero. In short, it's a standard for message conferences which we follow rather than fight.

As is the case with the file area definitions, you must highlight the item desired and click or press ENTER to modify any information. Doing so allows you to enter the Conference name and a significant amount of additional information in three main areas.

Paths

If desired, each conference in *WILDCAT!* can be associated with different Bulletins, Questionnaires, Menus, Help files, and Display files. Each conference also maintains its own separate message database, which can be stored in its own path if desired. If the message databases are all located in the same subdirectory, it causes no problem since the database names are named based on the conference number.

This path assignment flexibility may or may not be needed for your particular system. In the *Introduction* chapter we reviewed several types of BBS systems, some of which need different paths and some of which operate better with all conferences sharing the same path information. We review some examples again here to help with the decisions necessary for conference implementation.

```
01-20-93                    Conference Definition                    15:25:31
                            CONFERENCE DESCRIPTION

 Conference Private E-Mail                          MISCELLANEOUS
                                                    Conference sysop
                  PATHS                             Mail type                  Normal
 Bulletins        C:\WC30\BULL\                     Max conference messages    0
 Questionnaires   C:\WC30\QUES\                     Max lines per message      150
 Menus            C:\WC30\MENU\                     Number of questionnaires   0
 Help             C:\WC30\HELP\                     Number of bulletins        0
 Display files    C:\WC30\DISP\                     Check valid name           No
 Messages         C:\WC30\MSG\                      File area access

                                  TOGGLES
 Allow message attachments          N    Allow return receipts              Y
 Prompt to kill received messages   N    Allow private messages             Y
 Allow high ascii characters        Y    Force all messages private         N
 Allow message carbon copies        Y    Use alias names                    N
 Read only conference               N

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     [F1] Help - [F2] Edit Access - [F3] Copy - [F4] Global - [ESC] Exit
```

Example Configurations

An open BBS which is designed to have a series of different message discussion topics may establish a separate conference for each topic. Users change from conference to conference (an automated process while reading, if desired) and read messages only in those of interest. However, regardless of which conference a user is in,

all bulletins, questionnaires, menus, help files and display files will be uniform. In this type of system all conferences are replications of all others, with different message databases.

Another BBS may want to have different message topics as well, but also may want to establish different bulletins or questionnaires. Each message conference may also have fancy ANSI menus that reflect the topic of discussion. This would be accomplished simply by specifying a different path for the related files.

As a last example, a BBS might lease conference space on the system to several companies for use by their employees or customers. In this case the sysop may not want the callers for one company to access or even know about the others, and each conference would appear as a completely different system with its own bulletins, questionnaires, menus, and display files, reflecting the company name in charge of the conference. Since conference access is based on a caller's security profile (discussed later), all users automatically "see" the BBS as belonging only to the company with which they are affiliated.

These few examples should get you started on a plan for your system. If you are still undecided, just establish one conference and expand as your system grows and the direction of your BBS becomes more defined.

Miscellaneous

The miscellaneous section establishes a number of conference configuration items.

Conference sysop—This user name is designated as the person who receives all messages addressed to "sysop" from this conference only. The user name entered here doesn't automatically get any enhanced access in the conference until the user record is changed to specifically extend sysop control as a co-sysop of messages. See the section on user record editing for complete details of enhancing conference sysop access rights. If this field is left blank, no conference sysop name is available and [C]omments to the sysop are disabled. When [C]omments to the sysop is selected the display file NOSYSOP.BBS (.SCR) is displayed to the caller. If NOSYSOP.BBS doesn't exist in the display file path, a short hard-coded message advises the caller that comments are not allowed in the conference. This is a handy method of preventing [C]omments to the sysop in echomail conferences, where private messages to the local sysop are not desired.

Mail type—This is a multiple choice field which can be set to Normal or Netmail by pressing the [SPACE] to toggle the choices. The default is Normal, indicating the messages in the conference are either generated as local BBS messages or through an echomail link such as Fidonet. Note that Fido-type Echomail needs no special mail type setting since the tossing and packing auxiliary programs determine which conferences are echoed based on a configuration file.

The second choice is Netmail, and is used to indicate a conference will be used exclusively for Fidonet Netmail. Do not use this choice for anything but Fidonet mail or messages that fully support the Fido nodelist format. All callers entering messages in this type conference are prompted for an address conforming to the Fidonet nodelist format. A lookup table using a Fido nodelist is offered if an address is not known.

Max conference messages—This number indicates the maximum number of messages allowed to accumulate in the conference message database before *WILDCAT!* automatically purges the oldest message to make room for a new one. For example, if this field is set to 2500, the oldest message will be deleted when a new message is entered which would bring the total available to 2501.

For this reason, make certain your Max conference messages is set high enough to handle the volume of messages you want to accept and keep over a specific period of time. The maximum allowable messages per conference is 65,535. If the number of messages already exceeds this number when it is set, it will not be trimmed, but will be maintained at its current size until manually trimmed by the sysop. Note that when *WILDCAT!* purges messages, the messages are not automatically renumbered but continue to advance until an external renumbering utility such as wcRENUM is used.

Max lines per message—This item determines how long individual messages can be. The default is the maximum of 150 lines, but this value may be adjusted lower if desired.

Number of questionnaires—As mentioned previously, each conference can share a questionnaire path with other conferences, or each can have its own. In either case, the number of questionnaires available must be indicated. This figure is used by *WILDCAT!* to present the caller with a correct prompt after displaying the questionnaire menu.

Number of Bulletins—Like questionnaires, each conference can share bulletins with other conferences, or each can have its own path. In either case, the number of bulletins available must be indicated. This figure is used by *WILDCAT!* to present the caller with a correct prompt after displaying the bulletin menu, and to advise which bulletins have been updated since the user's last call.

File area access—This is another example of a pick-list item. Each conference can allow access to any number of your previously established file areas. Move the cursor to this field and press [ENTER] to pop-up a pick-list of the areas available.

Only areas marked with the selection dot will be available for review in the conference. Toggle the status of the selection dot using the spacebar or mouse, and move the highlight bar up and down using the arrow keys.

Important note: Before a file area can be listed *by anyone* in the conference, it must be included here. If not marked as available, no one can list the files in the area regardless of access rights. A user's security profile determines whether he will be able to *see* the file area and be able to list or download from an area while in the conference.

Check valid name—When set to the default of No, this toggle allows users to enter messages to other user names who are not in the user database. If set to Yes, messages are not accepted unless addressed to a valid user name. If set to Prompt, users are asked if they want to use the user name even if it is not found in the user database. If the conference accepts messages from an outside source such as echomail, this setting should usually be No. It can, however, be set to Yes or Prompt and will then limit even echomail conference messages to users in the local database. This may be desired if the echo is private and no "unknown" users will be participating.

Toggles

Allow message attachments—Controls whether a caller can use the At[t]ach file command while entering a message to upload a file for enclosure with the message. If a message has a file attached, everyone who has access to read it has the opportunity to immediately download the attached file.

Prompt to kill received messages—Controls whether users are prompted "This message has been received, please [K]ill it if it's no longer needed" after reading private messages.

Allow high ASCII characters—The default Y allows characters with values above 128 to be entered into messages. These characters include the IBM extended character set line drawing characters and foreign alphabet. This field should be set to N if a large portion of your callers do not have IBM character set support, or if the conference in question is part of a network echomail system that prohibits high-bit characters.

Allow message carbon copies—Controls whether users can send a copy of the message to other users at the time of composition.

Allow return receipts—Controls whether users can request notification when a message they authored is received. If allowed, a return receipt message is generated by *WILDCAT!* to the author, indicating the date and time the recipient viewed the message.

Allow private messages—The default of Y allows users to send private messages to other users. If set to N, private messages are prohibited, and all messages are public, except comments to the sysop.

Force all messages private—This toggle is used to establish a private E-Mail conference where all messages are private, with no public discussion. Messages to ALL are not supported with this flag set to Y.

Use alias names—If you want users to be known by their alias names (or handles) rather than real name in a conference, set this to Y. If activated, alias names must be used by all conference visitors when leaving messages. Aliases are selected by each user on an individual basis using the main menu choice [Y]our settings. However, the user record field for the alias is *only* visible when [Y]our settings is invoked *in a conference supporting alias names*. This is to prevent users from nagging the sysop about what an alias is used for if there are no alias conferences established. In an Alias conference the Main menu choices [U]serlist and [V]erify user display only alias names. When toggled to Y, the conference makes use of the alias name in each user's record rather than the real name. Alias names are established by each user via the [Y]our settings command, and may *only* be done in an alias conference.

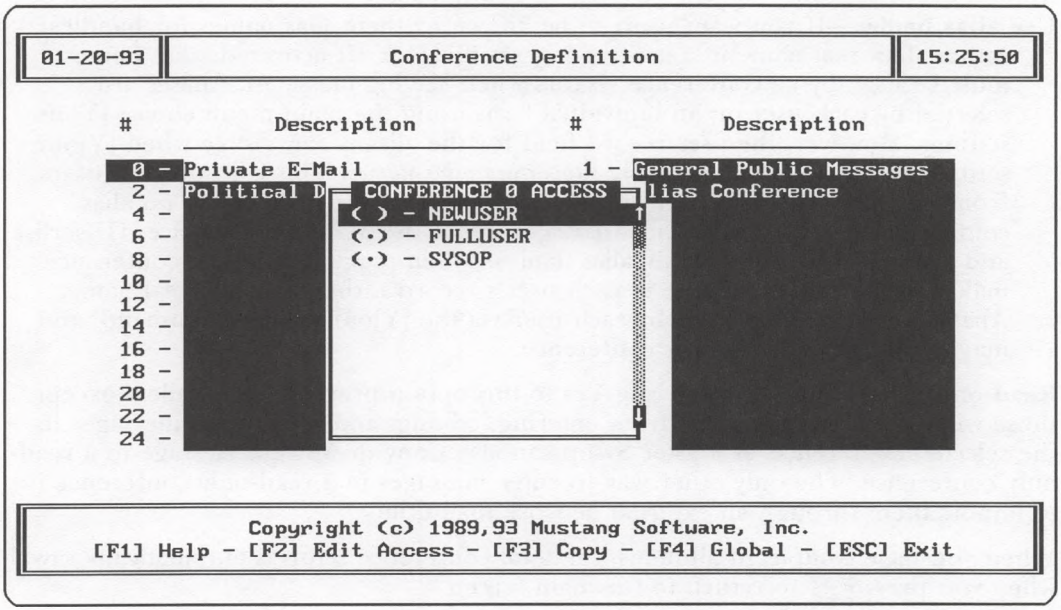
Read only conference— Answering Yes to this option prevents ALL callers except those with Master Sysop access from entering, editing, and replying to messages in the selected conference. A Master Sysop can also Copy or Move a message to a read-only conference. The only other way to enter messages in a read-only conference is to import them through an external network mail utility.

When you have completed all items, the total conference setup is automatically saved when you press [ESC] to return to the main screen.

Adjustments

You may notice that additional function keys are available for use on the conference definition screen, including [F2] Edit Access, which displays a view of related configuration items, [F3] Copy, which allows you to clone conference configurations, and [F4] Global Modify, which allows you to modify individual conference configuration items across a group of selected conferences.

Edit Access



F2 will not operate until all related items have been configured, and is designed to facilitate changes, reviews, and adjustments *after* configuration is complete.

When your BBS configuration is completed and you have defined all File Areas, Conference Definitions, and Security Profiles, you can highlight a conference and use the F2 Edit Access key to adjust the relationship between the three items.

Notice that when F2 is activated the screen displays a pick-list with selection dots. The pick-list displays a list of all Security Profiles, and uses a selection dot to mark those who have **Upload** access to the conference being reviewed. This screen is a great way to double-check that conferences are not erroneously being made available to security profiles.

When your setup is correct, save it by pressing ESC and return to the main screen. All changes made here update the security profile configuration screen where appropriate.

Multiple Conference Definition

```
01-20-93 | Conference Definition | 15:26:04

                    COPY CONFERENCE

From Conference                 To Conference
   0 - Private E-Mail      ↑    ( )   0 - Private E-Mail      ↑   ESC-Exit
   1 - General Public Messa     (•)   1 - General Public Messa
   2 - Political Debate         (•)   2 - Political Debate        F10-Copy
   3 - Alias Conference         (•)   3 - Alias Conference
   4 -                          ( )   4 -
   5 -                          ( )   5 -
   6 -                          ( )   6 -
   7 -                          ( )   7 -
   8 -                          ( )   8 -
   9 -                          ( )   9 -
  10 -                      ↓    ( )  10 -                      ↓

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   [F1] Help - [F2] Edit Access - [F3] Copy - [F4] Global - [ESC] Exit
```

Once a single conference has been created, you can easily create duplicates by using the F3 Copy function. It is often easier to create one configuration and clone it multiple times, following up with minor modifications. F3 operates from the main conference definition screen only.

In order to use the copy conference option you *must first generate a conference name for each conference*. Simply highlight an empty conferences and press ENTER, and fill in the conference name. Press ESC to save the name with all the default values. Repeat this process of entering the conference names until the desired number of conferences are defined, and then press F3 to display the conference copy screen.

The left pick-list displays a list of all conferences, and is the cursor location when F3 is invoked. Use the arrow keys or mouse to move the highlight bar over the conference to be copied **From**. Notice that the conference name changes from black to white when selected indicating which conference is being used for the source.

When you have highlighted the source conference, press ⇆ (tab) to move the selector bar to the **To** pick-list. When in the destination pick-list, again use the cursor keys to move the selection bar over the conference desired. Press the spacebar or click the mouse to toggle the selection dot on for each conference you want to copy. When your setup is correct, press F10 or click on the Copy button to perform the copy operation,

After completing a copy, all settings from the **From** conference are duplicated in all selected conferences in the **To** conference pick-list, except the name field.

Global Modify

Global Modify displays a list of settings which may be changed for any or all conferences you have defined.

You may toggle the item you wish to affect by the global change by moving the highlight bar to the item you wish to select, then pressing [SPACE] to toggle the selection dot on. Press [ENTER] to edit the value of each item you wish to apply globally to the conferences you have selected, then press [F10] to apply the changes.

```
01-20-93 ||                Conference Definition                || 15:26:37
                         GLOBAL CONFERENCE MODIFY
        Conferences to modify                  :
                                  Paths
 ( ) - Bulletins                               :
 ( ) - Questionnaires                          :
 ( ) - Menus                                   :
 ( ) - Help                                    :
 ( ) - Display files                           :
 ( ) - Messages                                :
                              Miscellaneous
 ( ) - Conference sysop                        :
 ( ) - Mail type                               : Normal
 ( ) - Max conference messages                 : 0
 (·) - Max lines per message                   : 150
 ( ) - Number of questionnaires                : 0
 ( ) - Number of bulletins                     : 0
 ( ) - Check valid name                        : Yes
 ( ) - File area access                        :

   [SPACE] Toggle - [ENTER] Edit - [F10] Global modify - [ESC] Exit

  [F1] Help - [F2] Edit Access - [F3] Copy - [F4] Global - [ESC] Exit
```

You may toggle the conferences you wish to affect by the global change by moving the highlight bar to the conference you wish to select, then pressing [SPACE] to toggle the selection dot on. Press [ESC] to return to the main Global Conference Modify menu.

Since many of the items selected have popup menus related to them, you may edit each popup by pressing [ENTER] on the item you wish to modify globally. You may edit or toggle each item on the popup. The options are SET, which will turn on access to the item for each conference defined; CLEAR, which turns off access to each item, or IGNORE, which leaves the current setting unchanged.

Press [F10] to implement your changes, and [ESC] to return to the main Conference Definition screen.

```
01-20-93 |                Door Definition                | 15:36:23

                 Door          Multiuser    In Use
                 ----------    ---------    ------
                 Main 1          N            N
                 Main 2          N            N
                 Message 1       N            N
                 Message 2       N            N
                 File 1          N            N
                 File 2          N            N
                 Sysop 1         N            N
                 Sysop 2         N            N
                 Mail            N            N
                 Dos             N            N
                 1               N            N
                 2               N            N
                 3               N            N
                 4               N            N

          Copyright (c) 1989,93 Mustang Software, Inc.
          [F1] Help - [F2] Edit Access - [ESC] Exit
```

Door Definition

This screen will reflect the number of doors you specified in *General Information - Part 1*. In addition to the number of doors defined by the sysop, *WILDCAT!* automatically includes ten additional menu choices that function exactly like doors, but use different menu choices. There are two DOS hooks for each menu, a Mail door from the message menu, and the remote drop to DOS from the sysop menu.

These additional "doors" are listed since their function can be controlled and checked just like a door. Complete operational details are in the section *Features in Depth*. If you do not make use of the extra functions, simply leave them blank.

As is the case with all list items, move the selection bar to the desired item and press ENTER to change the settings. Doing so displays a pop-up window where changes are made for each door.

Each door configuration consists of two options. Each item is toggled Y or N based on the characteristics of the door installed.

Multi-user Support

This field does not apply to the single line version of *WILDCAT!*, and this explanation may be skipped for users with that release. In the releases capable of multiline operation this field allows the sysop to specify whether a door has multi-user capability. If this item is set (with the selection dot), *WILDCAT!* performs *no* checking to see if a door is in use already when it is selected. It will allow more than one caller to enter a door at the same time. If not set, the program checks the status of each door prior to allowing entry to ensure that only one caller is in a door at any given time. In a system making use of only *one* line, all doors may be set to support multiline since only one caller can possibly be connected. In this case no checking needs to be performed, and there are other advantages to setting this flag even in a single line system as you will see below. If a door is not set multi-user, *WILDCAT!* will prevent more than one node from entering the door at any one time. Additional requests for a door already in use result in a message indicating that the door is currently in use and access is denied.

If this field is set to allow multi-user access, no usage checking is done by *WILDCAT!*, and it is assumed that the door program properly handles the file and record locking necessary for error free operation with two callers using it at the same time.

Currently in Use

This setting isn't actually a configuration option, but reflects the current status of the "in use" flag that *WILDCAT!* checks to determine if a second user is allowed in a non-multi-user door. It is included here to allow you to change the "in use" flag should it get set improperly. This could occur in some doors if carrier is dropped, and would result in refused door access to subsequent callers. For this reason, it may be a good idea for a single-line system to flag all doors as multi-user so the status flag is ignored. This flag is also available for manipulation in wcREPAIR since MAKEWILD cannot modify information in multiline systems without taking down every node, as wcREPAIR can.

When you have completed your entries for a door, press [ESC] to save your settings and return to the previous screen.

Edit Access

You may notice that additional function keys are available for use on the door definition screen, including [F2] Edit Access, which displays a view of related configuration items.

F2 will not operate until all related items have been configured, including the "Number of external doors" selection on General Definition screen #1, and is designed to facilitate changes, reviews, and adjustments *after* configuration is complete.

```
01-20-93 |                Door Definition                | 15:36:48

                 Door        Multiuser    In Use
                 ________    _________    ______
                 Main 1          N           N
                 Main   ┌─ DOOR 1 ACCESS ─┐   N
                 Messa  │ ( ) - NEWUSER   ↑   N
                 Messa  │ (·) - FULLUSER  ▒   N
                 File   │ (·) - SYSOP     ▒   N
                 File   │                 ▒   N
                 Sysop  │                 ▒   N
                 Sysop  │                 ▒   N
                 Mail   │                 ▒   N
                 Dos    │                 ▒   N
                 1      │                 ▒   N
                 2      │                 ↓   N
                 3      └─────────────────┘   N
                 4               N           N

          Copyright (c) 1989,93 Mustang Software, Inc.
          [F1] Help - [F2] Edit Access - [ESC] Exit
```

When your BBS configuration is completed and you have defined all File Areas, Conference Definitions, and Security Profiles, you can highlight a door and use the F2 Edit Access key to adjust the relationship between the three items.

Notice that when F2 is activated the screen displays a pick-list with selection dots. The pick-list displays a list of all Security Profiles, and uses a selection dot to mark those who have **Upload** access to the door being reviewed. This screen is a great way to double-check that doors are not erroneously being made available to security profiles.

When your setup is correct, save it by pressing ESC and return to the main screen. All changes made here update the security profile configuration screen where appropriate.

```
01-20-93 | Idle Screen Program Definition | 15:37:57

                Hook          Description
                ____  ____________________________
                  1 - MAKEWILD (Read Only)
                  2 - PRO! Utilities for WILDCAT!

                    EDIT DOS HOOK 1

          1. Name : MAKEWILD (Read Only)
          2. Path : C:\WC30\MAKEWILD.EXE /R

          Copyright (c) 1989,93 Mustang Software, Inc.
                  [F1] Help - [ESC] Exit
```

Idle Screen Definition

This screen defines the idle screen programs you enabled in *General Information - Part 1*. This option allows the sysop to run programs from *WILDCAT!*'s call waiting screen via menu. Idle screen programs you may want to run include utilities such as *wcPRO* or others you may want readily available during BBS operation.

As is the case with all pop-up windows, move the selection bar to the desired item and press [ENTER] to change the settings. Each program configuration section consists of two data entry fields:

Name—Enter the name of the program as you want it to appear on the waiting for call screen. The program list appears in a window when [SPACE] [D] is selected.

Path—Enter the full path to the program executable file or batch file, including the name of the executable file or batch file. For example, to run the PRO! Series you might enter:

```
C:\WC30\WCPRO.EXE
```

Programs run from the waiting for call screen are run either via a shell to a second copy of DOS or by terminating *WILDCAT!* to run the program. This choice is controlled in *General Information - Part 2*. The shell approach makes use of EMS or disk to swap out *WILDCAT!*'s code space. Note that EMS or disk swapping must be enabled before this feature is activated in *General Information - Part 2*.

A shell to DOS has the advantage of much faster execution and return to the BBS, especially if swap to EMS is enabled. However, if swap is not enabled, the memory available in the shell is limited since the entire *WILDCAT!* code remains in base memory.

When you have completed your entries for a program, press [ESC] to save your settings and return to the previous screen.

Chapter 5
Operation & Customization

"Man's mind stretched by a new idea never goes back to its original dimensions."

Oliver Wendell Holmes

In this Chapter...

- After MAKEWILD
  What you need to know to start it up
- Sysop functions
  F-Keys, Alt keys and more
- Filenames for custom displays
  A complete listing of internal and external files
- Customizing with color and ANSI
  How codes are added for special effects

After MAKEWILD...

You have completed the setup program and *WILDCAT!* is ready to run and take its first call. You may very well find that some fine tuning is in order and you are encouraged to make changes to MAKEWILD as needed.

Modem Configuration

One of the last things a sysop needs to do before starting *WILDCAT!* is to configure the modem so it properly reports connection information. The easiest way of doing this is to use the program WCMODEM.EXE distributed with your *WILDCAT!* system. *wcMODEM* is used to verify your modem operation, to set nonvolatile RAM fields to the proper values, and to troubleshoot any problems.

wcMODEM is installed in the HOME directory and should be run from that location. The complete documentation for *wcMODEM* is part of *Chapter 9, WILDCAT! Support Programs* since it is used on a regular basis for fine-tuning and testing. Refer to that section now if you have any doubts that your modem is properly configured or needs fine-tuning. When your modem is set properly, return to this location for initial testing and customization.

Initial Testing

Before using the batch file to start *WILDCAT!* with a modem connected, we recommend fully testing your configuration locally using the command line switch

```
WILDCAT  /B  LOCAL
```

The /B switch is used to pass the baud rate of a call already in progress when operating a front-end program such as a mailer. /B is also used when starting *WILDCAT!* with no modem attached as a local login. See the NetMail portion of *Features in Depth* for details on using the /B switch with front-end programs.

Change to the *WILDCAT!* home directory and execute a command line local login by entering the local switch exactly as indicated above. If everything is configured properly your screen will display your PRELOG.BBS text file and ask for your first name. Follow through with a complete login until you get to the main menu. Don't be alarmed if you are notified that questionnaires or other files don't yet exist; you will have the opportunity to create all of your customized options later.

NOTE: Your response to the password prompt is **VERY IMPORTANT!**

Do not use the same password used on other systems and *Do not* use simple names and phrases. In particular, refrain from using names of your children, spouse or pets, your initials, or any other words which are commonly known to be associated with you. Remember, this one word is the *key* to YOUR ENTIRE COMPUTER SYSTEM! The best passwords combine numbers, letters and punctuation, and consist of more than 7 characters, such as JM5S7@HP. If that's too much for you to handle, try 2 unrelated words of 4 or more characters separated by punctuation such as AUTO$TIMBER. Once your login is complete and you have reached the main menu, you should *immediately* use the F9 key to upgrade your security profile to the one that is assigned as Master sysop.

You should then continue with the system checkout by testing all functions and access rights at every security profile. Due to the number of configurable parameters within *WILDCAT!* and MAKEWILD, we encourage new sysops to check out *each* available menu choice for *each* security profile. The easiest method of performing such a checkout is to log out and back in again under an assumed name such as Test User. You can do so using the /B command line switch again, but using the assumed test name. Check each menu carefully. Once you have determined that the new user security profile is set up properly, use the F9 key to change to the next profile you assigned. Again, review each menu choice with this new profile active for correct operation. Repeat this upgrade and test procedure for every security profile available on your system. Remember to delete TEST USER using the user database function of the sysop menu after testing is completed.

Once you have determined that the system properly operates locally and doesn't allow unwanted access to any security profiles, you are ready to test modem operation.

Batch File Startup

WILDCAT! should always be started with a batch file, such as the CAT.BAT example supplied with the program. Batch file startup allows unattended restart of the program in the event of a power failure or other problem.

For your first startup, you can use the standard CAT.BAT file supplied with *WILDCAT!* as long as you use drive C: and the same subdirectory name as our example batch file. If necessary, edit the CAT.BAT file to reflect the proper drive and directories for your system. Any true ASCII text editor may be used to make changes. If needed, change the drive letter and subdirectory name in CAT.BAT to match your installation. The compelling reason for batch file operation is activation of enhanced program features and automatic restart of the BBS should a power failure or fatal system error occur.

The most basic batch file may simply start *WILDCAT!* and then re-call itself, however this creates a loop from which there is no escape! At a minimum we recommend a cyclical file which calls itself, but allows escape from the batch file if *WILDCAT!* is terminated normally with the F10 key. The method of checking for a normal exit via F10 is through use of the DOS errorlevel command. An example follows:

```
ECHO OFF                    prevents display to the screen
:RESTART                    label for restart if needed
CD \WC30                    changes to the proper directory
WILDCAT                     starts the program
IF ERRORLEVEL 1 GOTO RESTART
                            checks for error on exit and
                            restarts this batch file if needed
ECHO ON                     only gets here if the errorlevel
                            was less than 1, indicating a
                            normal exit with F10.
```

When *WILDCAT!* is terminated with the F10 key, a DOS parameter called the *errorlevel* is set to zero (0) by *WILDCAT!*, which is the standard errorlevel for normal program termination. This errorlevel can be set to any number desired by any program when it terminates, and a batch file test may be used to determine the number and take some action. The standard errorlevel for an error at exit is 1.

In the case above, we use the batch command IF ERRORLEVEL 1 GOTO RESTART to tell the batch file to jump to the batch file label :RESTART for the next command *if the errorlevel is one*. If the errorlevel is 0 (indicating the use of F10), the batch file does not branch to the :RESTART label, but continues with the next line (ECHO ON) which simply stops the batch and returns to DOS. If the sysop intends to make use of the remote drop to DOS, or some doors, additional batch commands must be added to the CAT.BAT file. These will be reviewed under the appropriate section in *Features in Depth*.

NOW, change to your *WILDCAT!* home directory (the one where the .EXE and .OVR files are located by default) and start *WILDCAT!* by invoking the CAT.BAT batch file by typing

```
CAT
```

The program should start and display what we call the "idle" screen. During startup, the status line (located about 3/4 of the way down the screen) should inform you of its progress, such as modem initialization. It should finally say "Waiting For Calls" on the status line when initialization is complete. If there is a problem during initialization, see the ERRORS section in the back of the manual for help.

Your BBS is now operational and will begin counting the number of calls received (local logons are not counted as calls). If you are updating from Test-Drive or another BBS you can easily set the call counter to the correct number using the *wcREPAIR* program. Complete instructions are included in the *WILDCAT! Support Programs* section of the manual.

Sysop keys

The control screen displayed while *WILDCAT!* is waiting for calls is called the "idle" screen. It provides a great deal of information on current and past program operation while serving as a control panel for all BBS activity.

A combination of Function keys and Alt keys control a number of activities while the system is waiting for calls, and while a caller is online. Although there is a relationship and some overlap between keys used while waiting for calls and when a caller is connected, we will review each separately for clarity.

Idle Screen keys

F1 or ALT S **System operator local logon**—This key is used for logging onto the system from the local console as the sysop, and automatically enters the sysop's name as defined in MAKEWILD. Use of this key while waiting for calls will cause *WILDCAT!* to skip the HELLO screens and continue to the Bulletin menu prompt. The resulting logon is otherwise identical to a remote access, except that the call counter is not incremented. The same keys can be used while a caller is on-line to toggle the sysop next flag, which will cause a beep when the current call has finished and the sysop login has been started.

Note: The first time this function is used after system startup, the sysop may be considered a new user since the name may not yet have been entered into the user database.

F2 **Keyboard**—Toggles the keyboard on/off. When toggled ON, the sysop has the ability to enter keystrokes from the local console which are accepted by *WILDCAT!* as if they were entered by the caller. The default is OFF. This toggle is automatically set to ON when a local page is answered and when logging in locally with F1 or ALT L. It operates exactly the same way when waiting for calls or when a caller is online.

F3 **Printer on/off toggle**—When toggled on, the printer will track the user's movements and activities while on the system. This same information is also recorded automatically in a file called ACTIVITY.### whether the print function is on or off. The program automatically checks printer status and if unavailable will toggle the F3 key off. If you find *WILDCAT!* does not recognize when your printer is off-line or out of paper, change the printer check in MAKEWILD *General Information*. This key operates exactly the same way when waiting for calls or when a caller is online.

F4 **Page hour override on/off toggle**—When ON, the SYSOP is indicating that pages will be accepted from on-line users even if the current time is outside of his paging hours as set in a system event. When OFF, the page function either pages the sysop or informs the user that the sysop is not available, in accordance with the paging hours. This key operates exactly the same way when waiting for calls or when a caller is online.

F5 **Page bell on/off toggle**—When the Page Bell key is ON, the system sends a page by beeping using the local system's speaker. If toggled OFF, the speaker is silent and a screen display of the page request is the only notice given to the local system. This key suppresses *all beeps* in *WILDCAT!* and operates exactly the same way when waiting for calls or when a caller is online.

F10 or ALT X **Terminate *WILDCAT!***—This function may be considered the "off" or "exit" switch. Use of F10 to exit *WILDCAT!* sets the errorlevel to 0, enabling batch file branching. See the section on batch files in *Features in Depth* for additional information. This key also operates when a caller is on-line, and sets the DOS next flag. After the current call is finished, *WILDCAT!* will terminate. This key takes the modem off-hook if configured to do so in MAKEWILD.

ALT D **DOS/Application menu**—This selection displays a pop-up menu over the idle screen containing the "Idle Screen Applications" defined in MAKEWILD. Applications are executed using swap to EMS or disk if specified in MAKEWILD, and return to the idle screen when finished. In addition to your applications, a DOS Shell choice is available. This function invokes a second copy of the DOS Command processor (usually COMMAND.COM).

If any of the menu choices are executed while waiting for calls, no calls are answered while in the DOS shell. In order to operate properly the system must have enough memory to support both *WILDCAT!* and the second DOS shell or application. If there is insufficient memory for the shell to be invoked, *WILDCAT!* will inform the local operator and ignore the command. The MAKEWILD option for swapping *WILDCAT!* to EMS or disk can overcome this memory problem.

After you have finished with an application you are automatically returned to the Idle Screen. After finishing a DOS shell, type EXIT to return to *WILDCAT!* The DOS prompt is altered during the shell to remind you to type EXIT to return. You may type EXIT from any subdirectory on your *WILDCAT!* drive since the home path is automatically restored by the program. Be careful *not* to re-start *WILDCAT!* with CAT.BAT while in a shell or else a second copy will be loaded in memory. Also note that you may not modify *WILDCAT!* databases while in a shell, using *wcREPAIR*, *wcFILE*, etc., although *wcREPAIR* may be run for DOOR.DAT editing.

ALT D also operates while a caller is on-line, and performs only a shell to DOS, suspending the caller's session until EXIT is typed to terminate the shell.

[ALT] [L] **Local logon**—Similar to [F1], this function is used for testing purposes or to allow local users other than the sysop access to the system. It allows the system operator to logon under any user name, along with the ability to see and test the "top end" procedures, such as the questionnaire, bulletins, and other information that a new or remote user would normally see, but which are bypassed when using the [F1] function. When used while a caller is on-line, it toggles the Local Next flag and causes the system to beep after the current call is finished and a local login is ready. This type logon increments the call counter as opposed to [F1].

[ALT] [N] **Node status**—This key combination changes the look of the idle screen, replacing the main center section with a display showing the status of all nodes on the system. If needed, the screen is scrollable to view additional nodes. No maintenance may be done from the node status screen, it simply serves as an information display. If a call is received, the display is reset to the standard screen upon completion of the call. The [ESC] key or [ALT] [N] restores the standard screen display while the node display is visible.

[ALT] [T] **Drive table**—This key combination changes the look of the idle screen, replacing the main center section with a display showing the space available on all drives used by *WILDCAT!* support files. If a call is received, the display is reset to the standard screen upon completion of the call. The [ESC] key or [ALT] [T] restores the standard screen display while the drive table display is visible.

[ALT] [R] **Reset stats**—This key combination zeros out the quick statistics displays in the lower left portion of the idle screen. The quick statistics can be used to gather information about BBS use over any period of time. An equivalent of the [ALT] [R] command is available as an internal *WILDCAT!* event and can be scheduled to run on a daily or weekly basis. See the section *Features in Depth* for complete documentation of *WILDCAT!*'s event handler.

Caller On-Line Keys

[F1] or [ALT] [S] **System operator local logon**—When used while a caller is on-line this key toggles the Sysop Next flag, which causes a beep when the current call has finished and the sysop login has been started.

[F2] **Keyboard**—Toggles the keyboard on and off. It operates the same when waiting for calls or when a caller is online. See *Idle Screen Keys* for additional detail.

[F3] **Printer on/off toggle**—Toggles the printer on and off. This key operates the same when waiting for calls or when a caller is online. See *Idle Screen Keys* for additional detail.

[F4] **Page hour override on/off toggle**—In accordance with sysop paging hours, this key operates the same when waiting for calls or when a caller is online.

F5 **Page bell on/off toggle**—When the Page Bell key is ON, the system pages by beeping the local system speaker. If toggled OFF, the speaker is silent and a page request is displayed on the local console. This key operates exactly the same way when waiting for calls or when a caller is online. All sound in *WILDCAT!* is controlled by this setting.

F6 **Start or End local chat or page**—Begins a local chat session with the on-line caller, or answers a page from the caller. The same key is used to end local chat or page. If a caller has ANSI enabled, chat uses a split-screen display mode where the caller types in one window while the local user enters text in another. Both can enter text at the same time in this configuration.

F7 **Add time**—Increases user time on-line by five minutes, updating the display in the user status box (if enabled).

F8 **Remove time**—Decreases user time on-line by five minutes, updating the display in the user status box (if enabled).

Note: The update of the user's time remaining in the status window may not appear immediately, depending on the users actions when the time is altered.

F9 **On-line user upgrade**—When F9 is pressed while a user is connected to the system, the local screen displays a numbered listing of defined security profiles. The local operator is prompted to enter a new security profile for the caller, which goes into effect immediately and becomes permanent. One of the first things a new system operator must do after logging on the first time is to use F9 to set his security level to that of the sysop as defined in MAKEWILD.

F10 or ALT X **Terminate WILDCAT!**—This key operates when a caller is on-line, and sets the DOS next flag. After the current call is finished, *WILDCAT!* will terminate, taking the modem off-hook if set in MAKEWILD.

ALT D **DOS menu**—This selection attempts to leave *WILDCAT!* and the current caller suspended in memory while invoking a second copy of the DOS Command processor (usually COMMAND.COM). This command suspends the caller's session until EXIT is typed to terminate the shell. In order to operate properly, the system must have enough memory to support both *WILDCAT!* and the second DOS shell. If there is insufficient memory for the shell to be invoked, *WILDCAT!* informs the local operator and ignores the command. The MAKEWILD option for swapping *WILDCAT!* to EMS or disk overcomes this memory problem. After finishing a DOS shell, type EXIT to return to *WILDCAT!* The DOS prompt is altered during the shell and displays a message to type EXIT to return. You may type EXIT from any subdirectory on your *WILDCAT!* drive since the home path is automatically restored by the program. Be careful *not* to restart *WILDCAT!* with CAT.BAT while in a shell or else it will load a second copy of the program. Also note that you may NOT run utility programs that modify the *WILDCAT!* databases while in a shell, including *wcREPAIR*, WCPRO, *wcFILE*, etc.

[ALT] [L] **Local next**—Toggles the Local next flag and causes the system to beep after the current call is finished and a local login is ready.

[ALT] [U] **User record window**—Toggles the size of the user record display window between no record, 2-line display of the user record, 5-line display of the user record, and full user record display. The size of the user record displayed on the BBS monitor has no effect on the number of lines per screen seen by the caller. This key is inoperative when a caller is using the full screen editor.

[ALT] [V] **VGA/EGA toggle**—If a VGA or EGA screen is connected to the local monitor, this selection changes to 43 or 50 line mode. This allows viewing the entire user record (with [ALT] [U]) while viewing a full caller screen at the same time. This key is inoperative when a caller is using the full screen editor.

[ALT] [W] **Writing to screen toggle**—If screen writing is toggled off, the local monitor does not echo connection activities. The screen is completely blank when screen writing is disabled. We recommend that screen writing be turned OFF when there is no need to monitor a caller's activity, especially on slower PC/XT systems. The processor resources needed to constantly update the screen can significantly reduce transmission of data to your callers. This toggle is especially useful when running *WILDCAT!* under a multitasking environment such as DESQview, where processor resources is of utmost importance.

On-line Message Keys

The following keys, [ALT] [0] through [ALT] [9] send a message to the on-line caller. The message consists of ASCII text files prepared by the sysop. The contents of each file is displayed both locally and to the caller when the corresponding ALT key command is invoked.

[ALT] [1]—Posts message ALT1.BBS to user, and then *logs user off*

[ALT] [2]—Posts message ALT2.BBS to user, and then *logs user off*

[ALT] [3]—Posts message ALT3.BBS to user, and then *logs user off.*

[ALT] [4]—Posts message ALT4.BBS to user, and then *logs user off.*

The user log-off resulting from issuing [ALT] [1] through [4] is temporary. The user may call back immediately providing the system is available. One of these four keys might be used to send a message to a caller indicating that he is being logged off automatically to allow you to perform some unscheduled maintenance that can't wait.

[ALT] [5]—Posts message ALT5.BBS to user, user stays online.

[ALT] [6]—Posts message ALT6.BBS to user, user stays online.

[ALT] [7]—Posts message ALT7.BBS to user, user stays online.

[ALT] [8]—Posts message ALT8.BBS to user, user stays online.

[ALT] [9]—Posts message ALT9.BBS to user, user stays online.

The use of [ALT] [5] through [9] does not cause the user to be logged off.

One of these messages might be used to inform a caller that his time available was being reduced to 15 minutes to enable you to perform some maintenance.

[ALT] [0] (zero)—Posts message ALT0.BBS to user, *logs the user off*, and locks the user name out of system for any future calls.

Caution: The status caused by the use of [ALT] [0] is permanent! The locked out condition may only be reversed by manually editing the user's record.

[ALT] [-] (minus)—Logs user off immediately with no notice or explanation.

Internal Files Used By *WILDCAT!*

Some of following files are automatically generated and updated by the program. *No intervention is required by the system operator*. Other files are created and maintained by the System Operator (SYSOP). The file name, default location, and creator are listed for each entry.

ACTIVITY.### **Location: \WC30** **Creator: WILDCAT!**

The activity log file contains information which traces the user's movement while on-line and notifies the sysop of operational errors that may need attention. Each line or node has its own activity file ending in the node ID number, i.e., ACTIVITY.001 for node 1. They are automatically created by the program if they do not exist. These files should be checked periodically as an indicator of the usage patterns of the system. The activity logs are also the basis for statistical compilation by call reporting programs such as *wcPRO*.

ALL.OK **Location: \WC30** **Creator: SYSOP**

This is a dummy file that must exist for testing the success of some external protocols. It can contain any text desired since it is not displayed. See the section *Features in Depth* for complete information.

ALLFILES.DAT (.IX & .DIA) Location: \WC30\DATA **Creator: WILDCAT!**

These files make up the file database. There is only one file database, although files may be limited in some conferences. The .DAT is the data file, .IX is the index file, and .DIA is the dialog file which only exists if the full database safety mode is in use or when *WILDCAT!* is run in network environments.

ALLUSERS.DAT (.IX & .DIA) Location: \WC30\DATA **Creator: WILDCAT!**

These files make up the user database. There is only one user database for the entire BBS. The .DAT is the data file, .IX is the index file, and .DIA is the dialog file which only exists if the full database safety mode is in use.

AUTONODE.DAT **Location: \WC30** **Creator: WILDCAT!**

This file is created when the "Auto-Determine Node ID" feature is turned on in MAKEWILD. It is a binary file containing information on the availability of node numbers for auto-assignment, and can be viewed or edited by AUTONODE.EXE.

BADALIAS.LST **Location: \WC30** **Creator: SYSOP**

This file is created and maintained by the system operator. It contains the alias names which *may not be used* by any caller under any circumstances. It is a plain ASCII text file containing one name per line.

BADFILES.LST **Location: \WC30** **Creator: SYSOP**

This file is by the system operator. It contains the names of files which *may not be uploaded* by any caller under any circumstances. It is a plain ASCII text file containing one filename per line. It is recommended that the names of your batch files (CAT.BAT, ZUP.BAT, ZDOWN.BAT, etc.) be placed in this file. This will prevent callers from sending duplicates of your batch control files which may perform unwanted or destructive activities. Any additional filenames may also be included to prevent uploads as desired. Wildcards such as * and ? are supported. For example, including the name WILDCAT.* in the list will prevent uploads of WILDCAT.ZIP, WILDCAT.EXE or any other files starting with WILDCAT. Likewise, including *.GIF would prevent uploads of all files with this extension. Adding *.* would prevent ALL uploads!

BADKEYS.LST **Location: \WC30** **Creator: SYSOP**

This file is created and maintained by the system operator. It contains words *to be excluded* from the file keywords allowed when entered by users, or when auto-generated from the description. It is a plain ASCII text file containing one word per line. *WILDCAT!* is distributed with a BADKEYS.LST file that may be augmented if desired. Wildcards are supported, so to exclude keywords such as GREAT, GREATER or GREATEST, you would add GREAT* to this file. Adding * on a line by itself would prevent ANY keywords from being entered!

BADNAMES.LST **Location: \WC30** **Creator: SYSOP**

This file is created and maintained by the system operator. During a newuser logon, *WILDCAT!* checks this file for validity of the caller's first and last name. This is useful in helping avoid the "CB handle" names prevalent on many boards, if they are not desired. Each line of the file must contain a single or full name followed by a carriage return. Wildcards are supported, to thwart callers who use variant spelling of bad words. A * character on a line by itself would prevent ANY name from being used!

Suppose the first few lines of BADNAMES.LST contained the following data:

```
president clinton
mrs.
doe
code
cracker
bad
dude
john
cuss*
```

When a user enters his or her first or last name, *WILDCAT!* quickly scans the BADNAMES.LST file for a match. The search is insensitive to case. Since this is another security device, a little extra attention will be spent on this subject to assure your understanding of the procedure. Let's explore the benefits and possible shortcomings of the sample listing above.

Good—Any user whose name was "President Clinton," "Code Cracker" or "Bad Dude" would be *immediately* logged off the system, without being permitted the chance to register, and without being written to the user database. A record of the failed logon event *will* be written to the ACTIVITY.### file and the printer (if available).

Bad—Users with the names "John Doe" or "Mrs. Abrams" would also be logged off the system as mentioned above. This includes those users whose *real* name happens to be "John Doe," etc., and worse, any user whose *first or last* name is "John." Make your list with this in mind!

CHAT.### Location: \WC30\DATA Creator: WILDCAT!

Chat files are used to record the text of the conversation between two callers while in chat between nodes. The ### represents the node number of the caller who initiated this private chat, for instance CHAT.028 is the chat file for Node 28. This file is always located in the DATAFILE path for each node since only nodes sharing a common DATAFILE path can enter chat together. This file may be read using the utility program VIEWCHAT.EXE which is included with *WILDCAT!*.

CHAT.GRP Location: \WC30\DATA Creator: WILDCAT!

The group chat file records the conversations of those entering group chat. It too is located in the DATAFILE path and may be overwritten or appended as specified in MAKEWILD. This chat file may also be read with the VIEWCHAT.EXE utility.

CONFDESC.DAT Location: \WC30 Creator: MAKEWILD

This configuration file is created by MAKEWILD and contains all conference information. It is used constantly by *WILDCAT!*.

DOOR.DAT Location: \WC30\DATA Creator: MAKEWILD

This file tracks the status of each door on the system, and prevents multiple access unless a door is tagged as multi-user. It is created by MAKEWILD in the path for NODEINFO.

DOOR.SYS Location: \WC30\WCWORK\NODEx Creator: WILDCAT!

This file is a plain ASCII text file which is somewhat of a standard DOOR information file used by a number of BBS systems including Opus, RBBS, PCBoard and GAP. It is created ONLY when control is passed to an outside program. It is created when DOORs are executed, when viewing a compressed file using VIEWCOMP.BAT, and when executing all menu hooks such as

MAIN1.BAT or FILE2.BAT. It contains information on the caller to be passed to outside programs. *WILDCAT!* always deletes this file when returning from a door or DOS hook. See also USERINFO.DAT.

ERROR.LOG **Location: \WC30** **Creator: WILDCAT!**

The ERROR.LOG is automatically created by *WILDCAT!* the first time any errors are encountered. If it exists it will contain information about the error. In a multiline system, all nodes write to one common error file with indications as to which node experienced the error. Errors are of two basic types, SYSTEM CRASH or NON-FATAL ERRORS. A system crash indicates that *WILDCAT!* was unable to recover from the error, and exited with an errorlevel of 1 to be restarted with CAT.BAT. Every crash indicates when it happened, a description of the problem, and often makes a suggestion of a repair procedure. Non-fatal errors do not cause *WILDCAT!* to stop operating, but reflect some problem that may need attention. Explanations are given when possible. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

EVENT.### **Location: \WC30** **Creator: WILDCAT!**

This file is created and updated from inside *WILDCAT!*. It contains the control elements for determining which event will take place and when. Each node creates its own file with an extension indicating the node number. These files are located in the home directory (where each node is started and the MAKEWILD settings reside). Events are more fully explained in the section in *Features in Depth*.

FILEAREA.DAT **Location: \WC30** **Creator: MAKEWILD**

This configuration file is created by MAKEWILD and contains all file area definition information. It is used constantly by *WILDCAT!*.

GROUPx.LST **Location: \WC30\DISP** **Creator: SYSOP**

This file contains a list of user names, one per line, to whom *WILDCAT!* should display GROUPx.BBS when the callers in this list log in. An example would be GROUP1.LST, which would display GROUP1.BBS to a caller if his name matches a user name in the list.

IDLEPGM.DAT **Location: \WC30** **Creator: MAKEWILD**

This configuration file is created by MAKEWILD and contains all information needed to run the specified programs from the Idle screen.

LCHAT.### **Location: \WC30** **Creator: WILDCAT!**

Chat files are used to record the text of the conversation between the sysop and a caller when the sysop initiates or answers a page with the F6 key. The ### represents the node number of the caller with whom the sysop initiated the chat. This file is always located in the startup directory, i.e. C:\WC30. This is a plain ASCII file which may be read using the DOS TYPE command, or a file browsing utility such as LIST.COM.

MAKEWILD.DAT **Location: \WC30** **Creator: MAKEWILD**
This is one of several files containing the run-time information required to initialize your particular custom configuration of *WILDCAT!*. It is created and modified automatically by MAKEWILD and *WILDCAT!*. MAKEWILD.DAT contains many of the basic MAKEWILD settings and is modified whenever these parameters are changed.

MSG####.DAT (.IX & .DIA) **Location: \WC30\MSG** **Creator: WILDCAT!**
These files are located in the MESSAGE database path of each conference and are numbered to match the conference number. The .DAT is the data file, .IX is the index file, and .DIA is the dialog file which only exists in a network environment or if the full database safety mode is in use. They may be located in a single subdirectory or even on different drives if needed.

MSG####.CRC **Location: \WC30\MSG** **Creator: *Tomcat***
These files are located in the MESSAGE database path of each conference and are numbered to match the conference number. These files contain a CRC table of messages in each database, and are used for duplicate message checking by *Tomcat* and TNet.

NODEINFO.DAT **Location: \WC30\DATA** **Creator: WILDCAT!**
This configuration file contains a group of records reflecting the full status of each node on the system. It records the last caller, individual call count, status of Page, Bell, Printer, Screen writing, etc. It is maintained entirely by the system, and is the key to operation of the TSR program CATEYE which modifies this file to control node activity.

QUES####.DAT **Location: \WC30\QUES** **Creator: MAKEQUES**
These files contain the questionnaire datafiles created by MAKEQUES. The file name structure is QUES followed by the questionnaire number. The file QUESNEW is displayed once during the login process, to new users only, while the file QUESDATE is displayed during the login process to all callers whose last call date is older than the filedate of QUESDATE.DAT.

QUES###.### **Location: \WC30\QUES** **Creator: WILDCAT!**
These files contain the user's typed responses to the QUES#.DAT inquiries. The files are automatically created by *WILDCAT!* if they don't exist, and are also appended by the code. These files may be manipulated by any word processor or the questionnaire section of the PRO! Series utility. All answer files are located in the conference path for questionnaires. The file name structure is QUES followed by the questionnaire number, followed by an extension designating the node number from which the answers originated. For example, QUES004.005 are answers to questionnaire number 4 by callers to node 5.

SECLEVEL.DAT (.IX) **Location: \WC30** **Creator: MAKEWILD**
This file and its associated index file are created by MAKEWILD and can only be modified in that environment. It contains all security profile references for use by *WILDCAT!*.

TCTEXT.DAT **Location: \WC30** **Creator: MKWCTEXT**

This data file contains the ASCII text of all *Tomcat* system prompts such as "TOMCAT MENU". It can only be modified using the MKWCTEXT.EXE program. Additional TCTEXT.DAT files may be distributed in different languages; contact the support BBS for details.

TCTEXT.DEF **Location: \WC30** **Creator: MKWCTEXT**

This file contains all default text prompts in a compressed record format, and is used only to restore individual defaults to the TCTEXT.DAT file. It should never be altered and is read only by the MKWCTEXT.EXE program.

TCMAINT.ERR **Location: \WC30** **Creator: *tcMAINT***

TCMAINT.ERR is automatically created by *tcMAINT* the first time any errors are encountered. If it exists it will contain information about the error. In a multiline system, all nodes write to one common error file with indications as to which node experienced the error. Every crash indicates when it happened, a description of the problem, and often makes a suggestion of a repair procedure. Explanations are given when possible. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

TNET.ERR **Location: \WC30** **Creator: TNet**

TNET.ERR is automatically created by TNet the first time any errors are encountered. If it exists it will contain information about the error. In a multiline system, all nodes write to one common error file with indications as to which node experienced the error. Every crash indicates when it happened, a description of the problem, and often makes a suggestion of a repair procedure. Explanations are given when possible. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

TNET.LOG **Location: \WC30** **Creator: TNet**

The TNET.LOG file records TNet's activity during import and export of message packets. Depending on the reporting style requested in the TNET.CFG or [Hubname].CFG file, the log may be brief, listing packet name and number of messages per conference imported and exported, or it may be verbose, listing the message header: to, from and topic.

TOMCAT.ERR **Location: \WC30** **Creator: *Tomcat***

TOMCAT.ERR is automatically created by *Tomcat* the first time any errors are encountered. If it exists it will contain information about the error. In a multiline system, all nodes write to one common error file with indications as to which node experienced the error. Every crash indicates when it happened, a description of the problem, and often makes a suggestion of a repair procedure. Explanations are given when possible. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

USERINFO.DAT **Location: \WC30\WCWORK\NODEx Creator: WILDCAT!**
This file is created for all DOORS and external operations. It contains complete user information about the caller online. Upon return to *WILDCAT!*, this file is read, and any changes made to it while in the door are updated in the user database. *WILDCAT!* always deletes this file when returning from a door or DOS hook. See also DOOR.SYS.

WCFILE.ERR **Location: \WC30** **Creator: *wcFILE***
WCFILE.ERR is automatically created by *wcFILE* the first time any errors are encountered. If it exists it will contain information about the error. In a multiline system, all nodes write to one common error file with indications as to which node experienced the error. Every crash indicates when it happened, a description of the problem, and often makes a suggestion of a repair procedure. Explanations are given when possible. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

WCMODEM.LOG **Location: \WC30** **Creator: *wcMODEM***
The WCMODEM.LOG file records *wcMODEM*'s activity during configuration and testing of modems and serial ports. The contents of this file may prove helpful to Mustang Software's technical support department in evaluating the cause of the problem.

WCTEXT.DAT **Location: \WC30** **Creator: MKWCTEXT**
This data file contains the ASCII text of all *WILDCAT!* system prompts such as "What is your first name?". It can only be modified using the MKWCTEXT.EXE program. Additional WCTEXT.DAT files may be distributed in different languages; contact the support BBS for details.

WCTEXT.DEF **Location: \WC30** **Creator: MKWCTEXT**
This file contains all default text prompts in a compressed record format, and is used only to restore individual defaults to the WCTEXT.DAT file. It should never be altered and is read only by the MKWCTEXT.EXE program.

XXXXXXXX.MDM **Location: \WC30** **Creator: *wcMODEM***
These files are optional modem configuration files distributed with *WILDCAT!* or created by WCMODEM.EXE. They are used by MAKEWILD for setting nonstandard modem configurations on a single line system, or in a multiline system to set a different modem configuration via an environment variable, and are intended to override the MAKEWILD modem settings.

They make use of any primary filename, but must end in .MDM. If needed, different modem configuration files may be applied to different nodes in a multiline system, and override the settings in the standard MAKEWILD data files.

XXXXXXXX.RAM **Location: \WC30** **Creator: *wcMODEM***
These files are modem NRAM configuration files created by WCMODEM.EXE. They are used only for sending modem setup strings to set nonvolatile RAM in a modem. Once NRAM is set, *WILDCAT!* recalls the settings using the stored values. These files make use of any primary filename, but must end in .RAM.

WILDCAT! Display Files

A display file in *WILDCAT!* is a text file sent to the caller for some purpose. These files are all located in the path for Display Files, configured as part of the Conference Definition in MAKEWILD. Note that you may, if you wish, specify a separate display file path for *each* conference.

Each of the following files may be generated by *wcDRAW*, or any word processor or text editor capable of creating plain ASCII files. Although samples of most display files are supplied with the program, *they may need to be edited by the system operator if they are to be used on the system.*

All of the display files are highly customizable and may contain special characters as defined by *WILDCAT!*. This list will review the purpose of each file without expanding on the tailor-made possibilities. See the section *Custom Display Files* which follows for tips and techniques to enhance the display files used on the system.

Although most text display files may be created in two versions, one for non-color (.BBS) and another containing ANSI color codes (.SCR), it is far easier to maintain a single set of files for both color and non-color callers with a .BBS extension. This is accomplished by using *WILDCAT!*'s text-based @color codes in the standard .BBS file rather than coding ANSI escape codes in a .SCR file. See the section that follows on adding color to your files using @color codes or ANSI sequences.

A third option uses the Remote Imaging Protocol (RIP) to provide full screen graphical images and mouse support. Callers with terminal software which supports RIPscrip as an emulation are able to take advantage of this option. Graphical display files have the same name as the normal text display files, with the extension .RIP, and are created using a RIP screen editor. More information on creating and editing RIP files will be provided at the end of this chapter.

ALT1.BBS through **ALT4.BBS**—The text associated with these files is sent to the user when the ALT key is pressed along with the associated number key. The use of this group of files is optional. If found, each selection will deliver the previously written message contained in ALT#.BBS to the on-line user. The files may be of any length, but would typically be one sentence or paragraph, or perhaps a screen full of information.

Upon completion of the file dump to the user, the user is then automatically logged off the system.

Each of these files is for the exclusive use of the system operator while at the local (non-remote) console. Each selection allows the system operator to display or "dump" the contents of the associated ALT#.BBS file to the user. These files

will interrupt any process except uploading and downloading. These files are similar to the ALT5.BBS through ALT9.BBS files, and are also optional, with the exception that they log the user off after the file display.

Caution: The keys [ALT] [1] through [ALT] [4] are functional whether or not the associated file is found. If the Alt # key is invoked, and a corresponding file does not exist, the user will simply be logged off without a warning message, just as if the [G]oodbye menu option had been selected.

ALT5.BBS through **ALT9.BBS**—The text associated with these files is sent to the user when the ALT key is pressed along with the associated number key. The use of this group of files is optional. If one or more of the files is not found in the *WILDCAT!* subdirectory, the function associated with that particular key will simply not work. If found, each selection will deliver the previously written message contained in ALT#.BBS to the on-line user. The files may be of any length, but typically are one sentence, a paragraph, or perhaps a screen full of information.

Each of these files is for the exclusive use of the system operator while at the local (non-remote) console. Each selection allows the system operator to display or "dump" the contents of the associated ALT#.BBS file to the user. These files will interrupt any process except uploading and downloading.

ALT0.BBS—The Alt 0 (zero) option works with a text file called ALT0.BBS. This option is listed separately, since its function is to scroll the file to the user, immediately log-off the user and **LOCK OUT** the user (prevent subsequent logons).

Caution: This option will log-off and lock out the user whether or not the related file name exists, and also writes the locked out condition to the user database. The user is denied any further logons to the system. The status of the user may only be reversed by the system operator by entering the user database and manually toggling the locked out status of the user. For this reason, be careful in the use of this option.

BADFILES.BBS—This file is displayed when a caller uploads a filename that is unacceptable because it is contained in BADFILES.LST.

BADNAMES.BBS—This file is sent to any user whose login name is found in BADNAMES.LST, prior to logging them off. It may simply state that the name used is unacceptable on the system.

BEGCHAT.BBS—This is the BEGIN CHAT display file. *WILDCAT!* by default prints a brief statement when the system operator answers a page or enters page chat, to introduce this activity to the user.

BIRTHDAY.BBS—This file is displayed IF the user calls on the anniversary of the date entered as date of birth in the user file record.

CLOSED.BBS—This is the file which is displayed in the event you have elected to run a closed system. The file will be displayed prior to taking the action defined in MAKEWILD.

COMMENTS.BBS—This file is displayed to a caller after electing to leave a comment to the sysop on the main menu. It might consist of a short notice reminding a user of the information required in a comment for proper registration, etc.

CONFLIST.BBS—This file is displayed whenever a caller asks to list the conferences available. If it exists, it replaces the generated list of conferences. If this file is used the sysop must make certain that the conference numbers match those in the dynamic list.

DLIMIT.BBS—This name stands for download limit, and is sent to a caller when denied access to a download because their download limit for number of files has been exceeded.

DKLIMIT.BBS—Download K limit is sent to a caller if a download request would cause the user to exceed the download K-byte limit as specified by security level.

DOORS.BBS—A menu file similar to BULLETIN.BBS that lists the available doors by number. It is set up and accessed in exactly the same manner as the bulletin equivalent. The number of doors listed on this text menu should agree with the number of doors set in MAKEWILD. It should be placed in the Path for Display Files as specified in the Conference Definition in MAKEWILD.

DOWNBAD.BBS—This file is sent to the caller when a download fails or is cancelled.

DOWNLDOK.BBS—This file is displayed immediately following *every* download, if successful. It may contain any information you desire, so let your imagination run wild, especially after reading about "custom" displays later on.

DUPENAME.BBS—This file is displayed as part of the user login verification *if* the verify names option is enabled and the caller indicates they are *not* the user whose name and location are displayed. It is designed to explain that duplicate names are not allowed, and to suggest an alternate method of signing on, perhaps using a variation of the caller's name.

ENDCHAT.BBS—This file follows the same conditions as BEGCHAT.BBS, the difference being that it is scrolled to the user when the PAGE mode is terminated.

EXPIRED.BBS—This file is sent to a user on the first call after his expiration date in the user record. It is designed to explain that his security profile is being altered.

FILE1.BBS, FILE2.BBS—This file is sent to a user when the corresponding DOS HOOK on the FILE menu are executed.

GOODBYE.BBS—The GOODBYE file is scrolled to the user just prior to logging off from the system. Although it may be of any length, it is recommended that it just contain a brief "Thank you for calling..." or equivalent. Otherwise a lengthy closing statement may cause a user to just hang up instead of logging off properly. This file is also optional, since *WILDCAT!* contains a hard-coded log-off statement.

GROUPx.BBS—This file is displayed to a caller whose user name appears in GROUPx.LST. These files must be located in the display file path for Conference 0. The file displays right after the caller enters his or her password, and before QESDATE.DAT, if it exists. GROUPx.BBS/.LST must start with GROUP1.xxx with NO numbers skipped, and must be located in the display file path for Conference 0

HELLO1.BBS through **HELLO9.BBS**—This series of display files (1 to 9) is used to display your system's welcome messages. They may contain a "logo", system information, or whatever you want to send to callers as they log in. They typically contain either text or ASCII characters, or a combination of both. The text might indicate the name of the board, perhaps the name of the system operator, date of origin, or other information that you wish to offer to distinguish your board from other boards. All 9 hello screens need not be used, and they may be added, updated and deleted as needed. Due to the method of checking for these screens you *must* have a .BBS version, not just a .SCR version.

HELLO1N.BBS through **HELLO9N.BBS**—These files operate like the standard hello screens, except they are time/date sensitive. They are only displayed to a caller when the caller's last call date predates the creation date of the HELLO#N.BBS file. They are used to send a message one time only to callers.

MAIL.BBS—Displayed when a caller selects the MAIL door from the message menu.

MAIN1.BBS, MAIN2.BBS—This file is sent to a user when the corresponding DOS HOOK on the MAIN menu are executed.

MSG1.BBS, MSG2.BBS—This file is sent to a user when the corresponding DOS HOOK on the MESSAGE menu are executed.

NEWSLTR.BBS—This file coincides with the menu option called [N]ewsletter, and should be located in the Display file path. It may contain text information other than a newsletter, but regardless of the contents of this file, or the menu title or prompt as a result of renaming the option, this file must always be named NEWSLTR.BBS in the directory in order for *WILDCAT!* to implement the function. When a caller logs in, the last call date is checked against the date of this file to determine if it has been updated since the last call. If so, the caller is offered the opportunity to view the file contents immediately.

NEWUSER.BBS—The NEWUSER.BBS file is just what the name implies. The file is scrolled to a user only *one* time, that being the first time the user calls the system.

NO-#.BBS—When the # is replaced by a node ID number (NO-3.BBS), this display file is sent to any user who attempts to connect to a node but is denied access based on the minimum security level required for access.

NO300.BBS—If 300 baud users are excluded from the system during certain hours as specified in the MAKEWILD configuration, the contents of the NO300.BBS files is scrolled to the caller immediately after logging on to the system. If this file is not found, a brief message is hard-coded into *WILDCAT!* which indicates to the caller that 300 baud is not permitted at that time, and instructs the caller when 300 baud is allowed.

NO1200.BBS—Displayed if 1200 baud is not available, just like 300 baud above.

NO2400.BBS—Displayed if 2400 baud is not available, just like 300 baud above.

NODE#.BBS—When the # is replaced by a node number, this display file is sent to all callers connecting with the node indicated. It is sent immediately after the PRELOG.BBS file, even prior to the caller entering name and password. In a single line system it could be used as a second prelog file if it is named NODE1.BBS It is one of two display files sent before asking for the caller's name (the other is PRELOG.BBS). You may want to make this file uninterruptable by embedding a nonstop command at the beginning. It cannot contain any special @ codes or -PAUSE- prompts and should be kept as short as possible. Prompts and @ color codes cannot be sent since the caller's parity has not yet been determined. See the section *Custom Display Files* which follows for details.

NOSYSOP.BBS—This file is displayed when the main menu command [C]omments to the sysop is chosen, but has been deactivated because a conference has no sysop assigned. It is designed to be used in echomail and other conferences where private sysop messages are not desired.

PAGED.BBS—The PAGED.BBS file is scrolled to the user whenever the system operator page is not completed. It is sent when any of the following keyboard settings for sysop page and page bell are met:

Page Off/Bell Off—PAGED.BBS is displayed if a page is requested and there is no answer during office hours, or if a page is requested outside of the office hours.

Page Off/Bell On—Same as above but "beep" is heard if paging is done.

Page On/Bell Off—System Operator is paged regardless of the hour, (no "beep" heard), and if system operator fails to answer page, PAGED.BBS is displayed.

Page On/Bell On—System Operator is paged, (with audible "beep"), and if system operator fails to answer page, PAGED.BBS is displayed.

POSTRIP.RIP—The purpose of POSTRIP.RIP is primarily to clear the screen and establish a window for any text that may be sent by *Wildcat!*. The reason for sending it whenever an appropriate .RIP display file isn't located is to make sure that the text of the .BBS display file is displayed in a text window and can be seen by the caller.

PRECHAT.BBS—Displayed when the [T]alk to other nodes command is requested from the main menu. It contains instructions for inter-node chat and paging other nodes.

PREDOWN.BBS—Displayed after a caller has requested a download, before any information about the transfer is requested.

PREGROUP.BBS—Displayed as a caller enters group chat from within the [T]alk to other nodes command.

PRELOG.BBS—PRELOG is displayed by *WILDCAT!* immediately after the System ID and *before* the NODE#.BBS file. It is one of two display files sent before asking for the caller's name (the other is NODExxx.BBS). You may want to make this file uninterruptable by embedding a nonstop command at the beginning. It cannot contain any special @ codes or -PAUSE- prompts and should be kept as short as possible. Prompts and @ color codes cannot be sent since the caller's parity has not yet been determined. See the section *Custom Display Files* which follows for details.

PREPRIV.BBS—Displayed as a caller enters private chat from within the [T]alk to other nodes command.

PRETEXT.BBS—This file is displayed when a caller selects the File Menu choice [T]ext Search command. It may be used to provide additional instructions or other information, if desired.

PREUP.BBS— This file is displayed after a user selects the [U]pload a file command from the file menu. It may be used to indicate the SYSOP's rules or preferences, such as only compressed files or "No Games".

PROTOCOL.BBS—This file is displayed when a new user is asked to select their default download protocol if the "Select Protocol" question is asked during QUESNEW.DAT, as well as when a current user asks to change the default protocol via the main menu. It may be altered to suggest a particular protocol.

QUOTES.BBS—*WILDCAT!* expects to find this file if the QUOTES option is implemented in MAKEWILD. If not found, *WILDCAT!* will continue to run, but will generate an error message to the user and to the activity log.

QUOTES.BBS is different from other display files, so some additional explanation is in order. The file may be created with any ASCII editor, and may be of any length. The first entry must begin on the first line of the file. A particular quote may contain any number of lines, with each quote being separated from the next by two consecutive carriage returns, created by pressing [ENTER]. Here is an example of the QUOTES.BBS file:

```
This line is quote no. 1          [ENTER]
[ENTER]
These lines are quote #2, and regardless of [ENTER]
the length of the lines [ENTER]
would be displayed until          [ENTER]
two consecutive carriage          [ENTER]
returns are encountered.          [ENTER]
[ENTER]
This is quote number 3. [ENTER]
[ENTER]
```

. . . and so on for the length of the file.

During the first actual running, *WILDCAT!* is initialized with a pointer to the first record in the QUOTES.BBS file. Thereafter, during each new logon, the user is presented with the next sequential quote in the file. In other words, if your board receives 50 calls a day, and you have 50 different quotes in your QUOTES.BBS file, each caller would receive a different quote. Starting with the 51st caller, the file would recycle to the first quote in the file. The quote pointer is saved after each call and is reinitialized when started after a reboot.

RATIO.BBS—The contents of RATIO.BBS will be displayed to the caller when the user's upload to download ratio has been exceeded. This ratio is set in MAKEWILD and is enforceable by security profile.

READFILE.BBS—This file is displayed to a caller when the [R]ead a Text File option is selected.

SECERROR.BBS—This file is displayed to a caller who fails to properly answer the verification on either birthdate or phone number prompts. The default text asks the user to correct his user settings if the system records are incorrect. It is sent just prior to forcing the caller to the comments area for an explanation.

SETALIAS.BBS—The display file shown to callers when they select an alias name from [Y]our settings on the main menu.

SYSOP1.BBS, SYSOP2.BBS—This file is sent to a user when the corresponding DOS HOOK on the SYSOP menu are executed.

UPLOADOK.BBS—This file is similar to DOWNLDOK.BBS mentioned previously, except that it is displayed immediately following *every upload*. As in DOWNLDOK.BBS, it may contain any information you desire.

USER####.BBS—This file will display to an individual user whose record number in the user database (top of the screen) agrees with the value of "####". For example, assume that a user named "Rick Hartley" existed as a caller on your board. A review of the user database indicated that Rick Hartley's user record number was "2141". A file named "USER2141.BBS" was created in the display file path. Then, during Rick's next logon, whenever that might be:

USER2141.BBS would be displayed to Rick (only), a memo is recorded in the activity log that the file USER2141 has been delivered. The USER2141.BBS file is then erased.

Note that running *wcREPAIR* on the User database will cause the user record numbers to be reassigned. If this feature is used, the numbers must be checked if a database repair is undertaken.

WARN##.BBS—These 4 sets of files are warning files are sent ## days before expiration. The ## can be replaced with 15, 30, 45 or 60.

Help Files

A help file in *WILDCAT!* is a text file sent to the caller when the caller requests help on any program function. These files are all located in the path for Help Files, configured as part of the Conference Definition in MAKEWILD. Note that you may, if you wish, specify a separate help file path for *each* conference.

Each of the following files may be generated by *wcDRAW*, or any word processor or text editor capable of creating plain ASCII files. Although samples of most help files are supplied with the program, *they may need to be edited by the system operator if they are to be used on the system,* particularly if you have changed the menu prompts and call letters.

All of the menu files are highly customizable and may contain special characters as defined by *WILDCAT!*. This list will review the purpose of each file without expanding on the tailor-made possibilities. See the section *Custom Display Files* which follows for tips and techniques to enhance the menu files used on the system.

Although most help files may be created in two versions, one for non-color ([file].HLP) and another containing ANSI color codes ([file]C.HLP), we recommend using a single set of files for both color and non-color callers. This is accomplished by using *WILDCAT!*'s text-based @color codes in the standard [file].HLP file rather than coding ANSI escape codes in a [file]C.HLP file. Files with [file]C.HLP can also accept @color codes. See the section that follows on adding color to your files using @color codes or ANSI sequences.

A third option uses the Remote Imaging Protocol (RIP) to provide full screen graphical images and mouse support. Callers with terminal software which supports RIPscrip as an emulation are able to take advantage of this option. Graphical help files have the same name as the normal text help files, with the extension .RIP, and are created using a RIP screen editor. More information on creating and editing RIP files will be provided at the end of this chapter.

CHAT.HLP —The help file displayed when a caller asks for [H]elp after selecting [T]alk to other nodes (inter-node chat). It provides an explanation of how to page another node or to enter private or public chat.

CHATC.HLP—Color ANSI version of CHAT.HLP above.

CHATCMD.HLP—Short for Chat Command Help, the help file displayed when a caller is in multi-node chat and types /HELP at the beginning of a text entry line. This file is active only in multi-node configurations.

CHATCMDC.HLP—Color ANSI version of the Chat command line help file above.

EDITMSG.HLP—This help file is displayed when help is requested within the line editor message editing sub-menu. The standard version distributed with the program should be adequate, but may be modified, if desired.

EDITMSGC.HLP—This is the color version of the message edit help file.

EVENTS.HLP—The help file displayed when creating or modifying events in the sysop menu.

EVENTSC.HLP—Color ANSI version of the above.

FDISP.HLP—The help file displayed when a caller is asked to select a file display mode in [Y]our settings. It explains the difference between single, double and full display.

FDISPC.HLP—Color ANSI version of the above.

FILES.HLP and **FILESx.HLP**—The non-color help file for the FILE menu. The text in this file should match the menu choices used by each individual menu file. Modification may be necessary if any menu selections are changed within MAKEWILD. This caution is in order for all .HLP files on the system. If a correctly named FILEx.HLP file is not found, the generic file named FILE.HLP is sent, if it exists.

FILEC.HLP and **FILExC.HLP**—The color version of the file menu help file. This type of naming is used to allow all help files to use the same .HLP extension. Again, if a properly named color help file is not found, the generic file named FILEC.HLP will be sent.

FMAINT.HLP—The help file displayed when file maintenance is performed from the sysop menu.

FMAINTC.HLP—The color ANSI version of the above.

JOINCON.HLP —The help file displayed when the caller selects the [J]oin command from any menu, and then asks for help.

JOINCONC.HLP —Color ANSI version of the above.

LISTFC.HLP—The help file displayed when the caller selects the [L]ist files command or [N]ew files command and then asks for help when prompted which file areas to list.

LISTFCC.HLP—The color ANSI version of the above.

LISTFP.HLP—The help file displayed when help is requested while listing files, between every screen displayed. It is part of the -PAUSE- prompt while listing files.

LISTFPC.HLP—The color ANSI version of the above.

MAIN.HLP and **MAINx.HLP**—The non-color help files for the MAIN menu.

MAINC.HLP and **MAINxC.HLP**—The color ANSI help files for the MAIN menu.

MARKED.HLP —The help file displayed when help is requested with the [M]ark files command while listing files.

MARKEDC.HLP—Color ANSI version of the above.

MARKMSG.HLP—The help file displayed when marking messages.

MARKMSGC.HLP—Color ANSI version of the above.

MSG.HLP and **MSGx.HLP**—The non-color help files for the MESSAGE menu.

MSGC.HLP and **MSGxC.HLP**—The color ANSI help files for the MESSAGE menu.

NMAIL.HLP—The file displayed when a user enters a message in a Netmail conference, and asks for help.

NMAILC.HLP —The ANSI color version of the above file.

NMAINT.HLP —The file displayed when the sysop selects the "Node Maintenance" function from the sysop menu.

NMAINTC.HLP —The color ANSI version of the above file.

ORIDE.HLP—The help file displays when help is requested while performing conference and file area overrides in the sysop menu, user record section.

ORIDEC.HLP—Color ANSI version of the above.

PROTO.HLP—The non-color help file displayed to users requesting additional help with upload and download protocols from within the file menu using the command [F]ile transfer information.

PROTOC.HLP—Color ANSI version of the protocol help file.

READMSG.HLP—This help file is displayed when the [H]elp command is requested after each message is displayed. It explains options available after reading a message, such as threading, killing, forwarding, public/private toggle, etc.

READMSGC.HLP—This is the color version of the above help file.

SCANMSG.HLP—The help file displayed when using the [S]can message command on the message menu.

SCANMSGC.HLP—Color ANSI version of the above.

SEARCH.HLP—The help file displayed when using the [T]ext search command on the file menu.

SEARCHC.HLP—Color ANSI version of the above.

SELCONF.HLP—The help file displayed when using the [U]pdate scan/read command to select default conferences on the message menu.

SELCONFC.HLP—Color ANSI version of the above.

SETEDIT.HLP—The help file displayed when selecting a default editor in the [Y]our settings command on the main menu.

SETEDITC.HLP—Color ANSI version of the above.

SYSOP.HLP and **SYSOPx.HLP**—The non-color help file for the SYSOP menus.

SYSOPC.HLP and **SYSOPxC.HLP**—The ANSI help file for the SYSOP's menus.

UMAINT.HLP—The help file displayed when using the [U]ser database maintenance command on the sysop menu, covers page one of the user record.

UMAINTC.HLP—Color ANSI version of the above.

UMAINTE.HLP—The help file displayed when using the [U]ser database maintenance command on the sysop menu, covers page two of the user record.

UMAINTEC.HLP—Color ANSI version of the above.

UPLDFL.HLP—The help file displayed when selecting a file area to upload a file.

UPLDFLC.HLP—Color ANSI version of the above.

USERSET.HLP—This help is displayed when the user is changing his settings using the [Y]our settings command from the Main Menu.

USERSETC.HLP—Color ANSI version of the above.

VISED.HLP—The help file displayed in the full screen visual editor when CTRL Z is pressed.

VISEDC.HLP—Color ANSI version of the above.

Bulletins

The following files are located in the Bulletin directory specified in the Conference Definition section of MAKEWILD. Each of the following files may be generated by *wcDRAW*, or any word processor or text editor capable of creating plain ASCII files.

All of the bulletin files are highly customizable and may contain special characters as defined by *WILDCAT!*. This list will review the purpose of each file without expanding on the tailor-made possibilities. See the section *Custom Display Files* which follows for tips and techniques to enhance the display files used on the system.

Although text bulletin files may be created in two versions, one for non-color (.BBS) and another containing ANSI color codes (.SCR), it is far easier to maintain a single set of files for both color and non-color callers with a .BBS extension. This is accomplished by using *WILDCAT!*'s text-based @color codes in the standard .BBS file rather than coding ANSI escape codes in a .SCR file.

During the following discussion the tag (.SCR) indicates the file is also available in color ANSI mode with the .SCR extension. Files with .SCR can also accept @color codes. See the section that follows on adding color to your files using @color codes or ANSI sequences.

A third option uses the Remote Imaging Protocol (RIP) to provide full screen graphical images and mouse support. Callers with terminal software which supports RIPscrip as an emulation are able to take advantage of this option. Graphical bulletin files have the same name as the normal text bulletin files, with the extension .RIP, and are created using a RIP screen editor. More information on creating and editing RIP files will be provided at the end of this chapter.

BULLETIN.BBS—This is in effect a sub-menu. It is displayed when the [B]ulletins option is selected from the main menu. This file should contain a listing of available bulletins, including the bulletin number, and a brief description of the contents of the associated bulletin.

The bulletin number listed in this file and description of the bulletins must agree with both the number and content of BULL#.BBS, described below.

BULL#.BBS—The "#" is the bulletin number, i.e. BULL14.BBS would be bulletin number 14. The actual bulletin is an ASCII file of any length. *WILDCAT!* will handle the appropriate screen pauses. The value of "#" must agree with the numbering and description given in BULLETIN.BBS, and the total quantity of bulletins must agree with the value entered in the conference definition in MAKEWILD.

Batch file execution: Doors, DOS Hooks and events

WILDCAT! uses a straightforward, consistent procedure for executing Doors, DOS Hooks and system events which run a batch file.

For single line systems, or multiline systems where each node can execute the same batch file for any given DOS hook, door or event, the corresponding batch file is placed in the \WC30 directory for BAT files, global. From there, *WILDCAT!* copies the batch file to the node work directory (for instance WC30\WCWORK\NODE1, and executes the batch file from the node work directory.

There may be instances, in a multiline installation, where different nodes may need to execute batch files with their own unique parameters.

In this case, create and save the batch file with the extension ".RUN", in the node work directory for each node. When *WILDCAT!* prepares to run a DOS hook or door, the [filename].RUN file is copied to [filename].BAT in the node work directory, and *WILDCAT!* executes the batch file from the node work directory.

See *Chapter 7 — Features in Depth* for more detailed information on doors, DOS hooks and events

DOOR#.RUN (.BAT)—Individual batch files where the # is replaced by the actual number of the door as indicated in DOORS.BBS. See the section *Features in Depth* for complete information on doors, including how to properly set up a door batch file.

DROPDOS.RUN (.BAT)—This batch file contains the commands to execute a remote drop to DOS. See the section *Features in Depth* for detailed creation instructions.

EVENT.BAT—This file is created by *WILDCAT!* whenever an event is executed requiring batch file operation. The event scheduler in *WILDCAT!* allows the sysop to specify the name of a batch file to execute at a specific time. When the event actually runs, the specified batch file is copied to the name EVENT.BAT, and is executed from the node work directory (C:\WC30\WCWORK\NODE#).

FILE1.RUN (.BAT)—The batch file created by the sysop for execution when the File Menu choice "DOS Hook 1" is selected. See the section *Menu Functions* for a discussion of the file menu command [X] DOS Hook 1 for additional information.

FILE2.RUN (.BAT)—See above.

LOGIN1.RUN (.BAT)—This batch file is executed after a user has logged into the BBS, right after the user has entered his password and verified birthdate and/or phone number. This batch file will execute whether or not the caller uses the "*" or "!" quick login.

LOGIN2.RUN (.BAT)—This batch file is executed after a user has logged into the BBS, right after the BBS has checked for mail. This batch file will execute whether or not the caller uses the "*" or "!" quick login.

MAIL.RUN (.BAT)—The batch file created by the sysop for execution when the Message Menu choice "Mail Door" is selected. See the section *Menu Functions* for a discussion of mail doors and off line readers.

MAIN1.RUN (.BAT)—The batch file created by the sysop for execution when the Main Menu choice "DOS Hook 1" is selected. See the section *Menu Functions* for a discussion of the main menu command **[X]** DOS Hook 1 for additional information.

MAIN2.RUN (.BAT)—See above.

MSG1.RUN—The batch file created by the sysop for execution when the Message Menu DOS Hook 1 choice is selected. See the section *Menu Functions* for a discussion of the message menu command **[X]** DOS Hook 1 for additional information.

MSG2.RUN (.BAT)—See above.

POSTCALL.RUN (.BAT)—This file is copied to POSTCALL.BAT and executed by *WILDCAT!* after every call *if it exists* in the WC30 home directory or the node work directory (C:\WC30\WCWORK\NODE#). It is used to execute a batch process after every call, and may be activated for any or all nodes. To disable this feature, simply do not create the file POSTCALL.BAT in any node work directories or the WC30 home directory. It is *not* needed to operate a front-end mailer program.

SCANFILE.RUN (.BAT)—This file is copied to SCANFILE.BAT and executed by *WILDCAT!* after each upload if it exists in the WC30 home directory or the node work directory. It is used to execute a post-upload scanning utility, and may be activated for any or all nodes. To disable this feature, simply do not create the file SCANFILE.BAT in any node work directories or in the WC30 home directory.

SYSOP1.RUN (.BAT)—The batch file created by the sysop for execution when the Sysop Menu choice "DOS Hook 1" is selected. See the section *Menu Functions* for a discussion of the sysop menu command [X] DOS Hook 1 for additional information.

SYSOP2.RUN (.BAT)—See above.

Menus

System Operators have the option to replace *WILDCAT!*'s internally generated Dynamic Menus with customized ASCII text file menus. The Security Profile Definition in MAKEWILD provides for a Menu Display Set, lining a security profile with a set of menu files. If the menu files are present in the MENU directory (defined in the conference definition screen in MAKEWILD), and if your caller has selected "Novice" Help Level in his user settings, *WILDCAT!* will display your customized menu files. Any allowable DOS filename character can be used to identify a menu display set. For instance, MAINZ.BBS and MAIN$.BBS are valid, while MAIN?.BBS and MAIN*.BBS are not.

Note that you may, if you wish, specify a separate menu file path for *each* conference.

Each of the following files may be generated by *wcDRAW*, or any word processor or text editor capable of creating plain ASCII files. Although samples of basic menu files are supplied with the program, *they may need to be edited by the system operator if they are to be used on the system.*

All of the menu files are highly customizable and may contain special characters as defined by *WILDCAT!*. This list will review the purpose of each file without expanding on the tailor-made possibilities. See the section *Custom Display Files* which follows for tips and techniques to enhance the display files used on the system.

Although text menu files may be created in two versions, one for non-color (.BBS) and another containing ANSI color codes (.SCR), we recommend using a single set of files for both color and non-color callers with a .BBS extension. This is accomplished by using *WILDCAT!*'s text-based @color codes in the standard .BBS file rather than coding ANSI escape codes in a .SCR file. Files with .SCR can also accept @color codes. See the section that follows on adding color to your files using @color codes or ANSI sequences.

A third option uses the Remote Imaging Protocol (RIP) to provide full screen graphical images and mouse support. Callers with terminal software which supports RIPscrip as an emulation are able to take advantage of this option. Graphical menu files have the same name as the normal text menu files, with the extension .RIP, and are created using a RIP screen editor. More information on creating and editing RIP files will be provided at the end of this chapter.

FILE.BBS and **FILEx.BBS**—This is the first example of a menu display file where x is any valid DOS filename character. If no menu files are created, or if a menu file is not found for a specific level, dynamic menus based on the MAKEWILD text are displayed. The menu files ending in .BBS are sent to callers without color turned on and the ANSI versions (.SCR) are sent to those with color selected.

Recall from the MAKEWILD discussion of security profile assignments that you may specify one of the many different menu display sets for each security profile. These different menu display sets are designated by any DOS filename character appended to the name such as FILEA.BBS. The menu file without an extra character (FILE.BBS) is only used if the appropriate extended name menu file is not found. The sysop must make sure that appropriately named menu files contain the correct menu commands desired for the security profile assigned to that menu display set. Check the MAKEWILD screen for *Security Profile Definition* to refresh your memory as to the assignments made for each profile.

MAIN.BBS and **MAINx.BBS**—The MAIN menu display files where x is replaced by any valid DOS filename character, and the color ANSI equivalents. See the full explanation of text and ANSI menu files under **FILEx.BBS.**

MSG.BBS and **MSGx.BBS**—The MESSAGE menu display files where the x is any valid DOS filename character, and the color ANSI equivalents. See the full explanation of text and ANSI menu files under FILEx.BBS

SYSOP.BBS and **SYSOPx.BBS**—The SYSOP menu non-dynamic display files where x is replaced by any valid DOS filename character, and the color ANSI equivalents. See the full explanation of text and ANSI menu files under FILE.BBS and FILEx.BBS

Questionnaires

Questionnaire files are created and edited with MAKEQUES, the questionnaire editor for *WILDCAT!* BBS. These questionnaire files are all located in the path for Questionnaire Files, configured as part of the Conference Definition in MAKEWILD. Note that you may, if you wish, specify a separate Questionnaire file path for *each* conference.

Although sample questionnaire files are supplied with the program, *they may need to be edited by the system operator if they are to be used on the system.*

See Chapter 9 for more information on creating, editing, and using questionnaires.

QUESTION.BBS (.SCR)—This file is the text menu file which lists the questionnaires available on the system. It is created and presented in the same manner as the BULLETIN.BBS file and DOORS.BBS file.

QUESCLOS.DAT—This is the questionnaire file which is presented to a new caller *if* the system is set up as a closed board and the closed board questionnaire is selected in MAKEWILD. It is created by MAKEQUES, the questionnaire generation program, and the answers are placed in QUESCLOS.### (the ### is replaced by the node ID number). See *Chapter 9 - WILDCAT! Support Programs* for additional information on creation of questionnaires.

QUESDATE.DAT—This is the questionnaire file which is presented to a caller if the caller's last call date is *before* the date of the questionnaire file. It is designed to allow each caller to answer a questionnaire once and only once for surveys or polls. It is created by MAKEQUES, the questionnaire generation program, and the answers are placed in QUESDATE.### (the ### is replaced by the node ID number). This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location. See *Chapter 9 - WILDCAT! Support Programs* for additional information on creation of questionnaires.

QUESNEW.DAT—This is the questionnaire file which, if it exists, is presented to every new caller to the system. It is created by MAKEQUES. This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location. See *Chapter 9 - WILDCAT! Support Programs* for additional information. The answers are placed in QUESNEW.### (the ### is replaced by the node ID number).

QUES###.DAT—These files are the questionnaire files generated by MAKEQUES. The ### is replaced by the appropriate number of the questionnaire as reflected in the QUESTION.BBS file. See *Chapter 9 - WILDCAT! Support Programs* for additional information.

Additional File Information

Now that we know the names of available files, a review of *WILDCAT!*'s criteria for displaying different types of files is in order.

Each user controls whether or not color is turned on as a default when he connects to *WILDCAT!*. To receive color properly a caller must have ANSI enabled, either through his communication program or using the DOS device ANSI.SYS. If color is turned on for a user, the .SCR display files are sent if they exist. If they don't exist, the .BBS files are sent. If a caller has color turned off, the .BBS files are always used.

The SPACEBAR may be used to terminate the scrolling of any display file, either .BBS or .SCR, by either the caller or local SYSOP. This is mentioned here since many ANSI file take an extremely long time to complete a single display screen, and callers may want to abort such a screen. This may be overridden with a control sequence as explained later in this section.

File Display Order

There are a number of factors that control which files are sent to a caller but the order is consistent.

NO300.BBS—(1200/2400) Immediately after the *WILDCAT!* copyright is displayed the baud rate exclusion files are sent, if the call time and baud rate cause a restriction.

PRELOG.BBS—Immediately after the restriction file for baud rate the PRELOG file is sent. Like the baud restriction files, it should *not* contain any @ codes and in most cases should be limited to as few lines as possible.

NODE###.BBS—The node-specific display file is sent next, if it exists. It too should be as short as possible to allow all previous information to remain on screen without scrolling. Remember, no - Pause - commands can be sent until we know the caller's parity, which is detected at login.

LOGIN takes place at this point. The batch file LOGIN1 is executed if it exists in the WC30 or node directory as soon as the caller has entered his name and password. If the login siren is set for a user it is activated on the PC speaker.

NO-###.BBS—If the caller does not have access to the node this display file is sent.

GROUP###.BBS—If the caller's name is included in a list of user names in a GROUP###.LST file, the appropriate GROUP display file is sent.

Phone and birthdate verification takes place at this point (between GROUP### and QUESNEW.DAT), if activated.

QUESNEW.DAT—If the caller is a new user, the new user questionnaire is sent. This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location.

QUESDATE.DAT—The date-sensitive questionnaire is sent if the caller's last call date predates the creation date of the questionnaire. This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location.

BIRTHDAY.BBS—Sent if the current date is the anniversary of the caller's date of birth.

The Security Profile display file is sent. This filename is set in each security profile and can be anything desired for each profile. It is sent to everyone assigned to the security profile.

HELLO#N.BBS alternating with **HELLO#.BBS**—All date sensitive hello files are sent if the date of the callers last call predates the creation date of the HELLO#N.BBS file. The batch file LOGIN2 is executed if it exists in the WC30 or node directory.

Adding color to display files

WILDCAT! has the ability to include color and simulated animation in most display files by use of the ANSI color rendition codes. Under normal circumstances a computer system must be instructed how to interpret these codes by a configuration command placed in the CONFIG.SYS file. This setup is NOT required for the PC running *WILDCAT!* since an ANSI driver is incorporated into the program.

There are two methods of placing color in *WILDCAT!* display files. The first makes use of the ANSI color codes consisting of the ESC character (ASCII 27) followed by a bracket followed by a color number followed by the lower case letter m. A typical ANSI color code looks something like **ESC[32m**, except the ESC character is usually displayed as a small arrow. While these codes are somewhat of a standard, they are not easy to understand or enter with a plain text editor.

The alternative method of entering color into a *WILDCAT!* display file is to make use of embedded codes, called "@ CODES" since they are flanked by the @ character. Example colors are @0E@ which is yellow foreground on black background and @0F@ which is high intensity white on black. There are several advantages to using @ codes, not the least of which is the ease of entry using any text editor.

One of the biggest advantages of @ codes is that they are automatically stripped out of a display file when it is sent to a caller who does not have color turned on. This means that you can create just one display file (with a .BBS extension) for both color and non-color callers. Only @ color codes should be placed in .BBS files, not ANSI codes. If you code all of your .BBS files with @ codes you can do away with the .SCR equivalents. This is the recommended procedure unless you need to add animation or other fancier ANSI sequences to your files. The @ codes for color are listed in *Appendix B* of this manual for reference, and on the back cover of this manual.

wcDRAW

Using @ color codes is simple, and any plain editor can be used. The best way, however, to create and edit Bulletins, Display Files, Menus and Help Files, is to use the special *wcDRAW* screen editor provided with *WILDCAT!* BBS. Complete information on *wcDRAW* can be found in *Chapter 9, WILDCAT! Support Programs.*

A complete list of @ color codes can be found in *Appendix B*.

Adding music to display files

You may even want to add "music" to your ANSI display files, for your callers using *QmodemPro* or another communications program capable of interpreting the ANSI "music" characters. Music will be generated on the PC's speaker only if the following conditions are met:

1. *QmodemPro* is configured for ANSI terminal emulation
2. *QmodemPro*'s Music Toggle is ON
3. *QmodemPro* receives encoded music data.

To be recognized by *QmodemPro*, encoded music data must conform to the following format:

```
ESC [M ........ music codes ........ ^N
```

Please refer to your BASIC language manual for further information on the PLAY statement. Music strings must end with the [CTRL] [N] (^N) character. If the ^N character is missing, it is assumed by *Qmodem* that the following text, up to 255 characters, is playable music.

Customized Files

It is also possible to "personalize" display files by placing information from the BBS system into the display files, such as the caller's name. These custom codes also make use of the @ syntax, and are placed in display files using WCEDIT or any ASCII editor.

When an embedded @ code is encountered in a display file it causes the system to extract the corresponding information from the system files. The following list summarizes the codes available.

System Information:

@TIME@ ..... Current system time (from clock) in format HH:MM
@DATE@ ..... Current system date in format MM/DD/YY
@BBS@ ..... Name of the BBS in MAKEWILD
@TFILE@ ..... Total number of files available on the system
@TMSG@ ..... Total messages on the system
@TCALLS@ ..... Totals calls received by the system
@TUSER@ ..... Total number of users on the system
@LASTCALL@ ..... Time of last call to the node
@PREVON@ ..... Name of last caller to the node
@NODE###@ ..... Node ID status; Up, Down, Waiting, etc. Replace the # with the node ID to list, padded with zeros; i.e., @NODE002@
@SYSOP@ ..... Sysop's full name from MAKEWILD
@VER@ ..... *WILDCAT!* version number
@NODE@ ..... Node ID number for current connection
@CONF@ ..... Current conference name
@CONFOP@ ..... Conference sysop

User Record Information

@FIRST@ ..... User's first name
@USER@ ..... User's full name
@FROM@ ..... User's from field
@ALIAS@ ..... User alias name.
@COMPANY@ ..... Displays company field of user record
@ADDR1@ ..... User address 1.

@ADDR2@ ..... User address 2.
@CITY@ ..... User's City
@STATE@ ..... User's State
@ZIP@ ..... User's zip code.
@PHONE@ ..... User's phone number
@DATA@ ..... User's data phone
@ACCBAL@ ..... User's account balance
@NETBAL@ ..... User's netmail balance
@MEMO@ ..... User's Memo date
@MEMO1@ ..... User's Comment 1
@MEMO2@ ..... User's Comment 2
@SINCE@ ..... User's date of first call
@BDATE@ ..... User's birth date
@CPU@ ..... User's computer type
@CALLS@ ..... User's total number of logons
@PROTOCOL@ .... User's default transfer protocol
@LASTNEW@ ..... User's last [N]ew files search date
@LASTON@ ..... User's date of last call
@SEC@ ..... User's security profile
@MLEVEL@ ..... User's menu display set number
@UPK@ ..... User's total upload kilobytes
@DOWNK@ ..... User's total download kilobytes
@UPS@ ..... User's total number of uploads
@DOWNS@ ..... User's total number of downloads
@MSGSLEFT@ ..... User's total number of messages posted
@EXDATE@ ..... User's expiration date

User's Current Call Information

@TIMEON@ ..... User's time on system this call
@LEFT@ ..... User's time remaining this call
@BAUD@ ..... User's current baud rate
@DAYBYTES@ ..... User's daily download kilobytes
@DLKLIMIT@ ..... Displays maximum daily download kilobytes limit
@MAXRATIO@ ... User's maximum up/download ratio
@MAXDL@ ..... Maximum downloads possible per day

@MAXDK@ ..... Maximum download K possible per day

@KBLEFT@ ..... Kilobytes left that user can download today

@EXPDAYS@ ..... Days until user's expiration date

Special Display File codes

@CLS@ ..... Clears the screen and does the same thing as the form feed (CTRL L) character, an ASCII 12. It will clear the screen whenever it is encountered. Use it to clear the screen as the first character for any files you wish.

@BELL@ ..... Beeps the speaker at the remote terminal only.

@PAUSE@ ..... Causes display of the - Pause - prompt immediately, regardless of the number of lines that have scrolled. It is ignored if the caller selects nonstop scrolling.

@NOSTOP@ ..... Embedded in a file to turn off the user's ability to view less than the full display file on screen. The user receives the appropriate page pauses, but the [S]top option is not available. Place @NOSTOP@ at the beginning of the file if you want it to affect the entire contents. The SPACE is disabled for stopping the screen while @NOSTOP@ is in effect.

@STOP@ ..... Stops the display again if a previous @NOSTOP@ was issued.

@NOPAUSE@ ..... Eliminates the - Pause - prompt line in display files. This would likely be used in your "fancy" graphics screens. No pauses are made.

Both @NOSTOP@ and @NOPAUSE@ are automatically cancelled at the end of a display file, and need not be turned off unless you want the option to change back. Some of these variables are updated during a call in the event of a dropped carrier.

Several new @ code constructs allow creation of one display file that actually sends different messages, depending on security profile. The three constructs are:

@IFSEC=PROFILE@ Specifies that the text on the following lines should be sent ONLY if the security profile is equal to the profile name following the equal sign. All text is sent until an @ELSE@ or an @ENDIF@ is encountered.

@ELSE@ ..... The construct @ELSE@ specifies that the preceding text sent to a specific security profile is now completed, and that text following should be sent to all other callers (those that are not at the previously specified level). Note that text following @ELSE@ is

not sent to the security level specified in the original @IFSEC= construct. @ELSE@ must follow a single @IFSEC= construct, and cannot be placed after an @ENDIF@.

@ENDIF@ ..... The construct @ENDIF@ specifies that the preceding text sent to a specific security level is now completed, and that the text following (if any) should be sent to everyone (including the level specified previously), unless another @IFSEC= construct is encountered.

These constructs are not activated in Menus, only Display Files. Here is a valid HELLOx.BBS display file:

```
@IFSEC=NEWUSER@
   Hello @FIRST@, your security level is NEWUSER and allows you to ... [More text,
seen only by users at NEWUSER level]
@ENDIF@
@IFSEC=FULLUSER@
   Hello @FIRST@, your security level is FULLUSER and allows you to ... [More
text, seen only by users at FULLUSER level]
@ENDIF@
@IFSEC=PEON@
   Hello @FIRST@, your security level is PEON and you can't do much of anything
...
@ENDIF@
   This text is sent to ALL levels
```

All constructs must be upper case, flush left, and on a separate line, and cannot have any other @ codes or text on the same line! You cannot nest levels of IFSEC= constructs. The following is NOT valid:

```
@IFSEC=NEWUSER@
  ... text goes here
@ELSE@
  ... more text
@IFSEC=FULLUSER@
  ... still more text
@ELSE@
@IFSEC=PEON@
  ... yet more text
@ENDIF@
@ENDIF@
@ENDIF@
```

These are very powerful functions when properly implemented and will provide additional enjoyment and assistance to your callers.

ANSI Color Codes

If you want to use ANSI instead of @ color codes for animation or other reasons, the ANSI files may be created with most text editors or word processors that can handle plain ASCII text and can also place the ESC character (ASCII 27) into text, or with an ANSI editor such as THEDRAW. For reference, the codes to use for various colors are found in Appendix B of this manual.

A complete tutorial on ANSI editors is beyond the scope of this documentation. However, there are a number of pitfalls, curiosities, and special characteristics of most ANSI editors which can be covered in this manual. Be certain to completely review the documentation to your ANSI editor in addition to this brief help file, since these comments may not apply completely to editors other than THEDRAW.

When using an ANSI editor you may be given several options when saving your file to disk. If given choices you should select line lengths as long as possible, up to the maximum or 255 characters, and *no* clear screen.

One of the most common problems encountered by new users is the creation of a display file which is too long and gets a - Pause - prompt in the middle. This is because almost all ANSI screens are saved as 25 lines, or as a screen which will fill a full monitor screen. The solution is rather simple. After completing the creation of the file in THEDRAW, you must edit it in a plain text editor such as TED or Qedit. When the file is viewed in the editor, several precautions must be taken to preserve the correct ANSI placement. The first is the margins in your editor should be set to 0 for the left and 255 for the right. You will quickly see that the color codes appear as funny codes and are not interpreted as color. The ESC character (ASCII 27), for example, is often seen as a highlighted left bracket ([ ) or a small arrow, and is followed by the actual bracket character and color codes as needed to produce the color desired. If you are unfamiliar with ANSI color codes take a look at Appendix B.

The editing which needs to be performed consists of removing the ANSI codes at the very end of the display file. These codes are placed there by THEDRAW to locate the cursor on screen line 25 at position 1, an action we do NOT want. To get to the bottom of the file, use the down arrow or PgDn key to locate the last line, and then use the right arrow to go to the last character of the file. Once there look to the left and locate the last printable character that you actually want to appear to the caller. If your display file is composed of a message in a double-line border, this would be the lower right corner of the border. Place the cursor to the right of this last printable character and delete everything in the file from that point. The characters to be deleted will include a number of ESC codes followed by regular brackets, numbers and letters. When you have deleted the necessary characters, place a CR/LF (press [ENTER]) immediately after the last printable character to start a new line. Your file should now display properly.

Other editing may now be done, including placement of @ codes. The first thing you may want to do is place a clear screen code as the very first character in the file (@CLS@).

Embedded @ codes may be placed in a file along with the ANSI codes from within THEDRAW if desired. You need to be careful since the size of the translated information will probably be larger or smaller than the actual @ code, making any text surrounded by box borders appear misaligned. The only way to overcome this misalignment is to complete an entire ANSI file, then create an ANSI coded animation sequence that places the @ code information at the correct location using cursor locate commands. The exact method of animation and cursor location using THEDRAW is beyond the scope of this document. See the documentation included with THEDRAW for details.

Whenever you re-edit a color file you must use your editor to check your embedded codes and to delete the extra codes at the end of the file.

RIPscrip and *WILDCAT!*

In order to explain the addition of a graphical caller interface to *WILDCAT!* we must first explain the graphical standard selected for the interface. We chose the RIPscrip standard primarily because of its support from the BBS industry. Although there are several alternatives, RIP (Remote Imaging Protocol) is emerging as the first to be embraced by the major BBS developers, including MSI. In addition to RIP support in *WILDCAT!* we have added RIP support to *QmodemPro* as a terminal emulation, making *QmodemPro* the first commercial telecommunications program to offer this option.

The RIPscrip Graphics Protocol Specification v1.5.3 (as supported in MSI products) is Copyright (c) 1992-1993, TeleGrafix Corporation and is written by Jeff Reeder and Mark Hayton.

What is RIP?

In order to send graphics effectively across a phone line there must be a protocol that can describe a graphical picture and send a description of how that picture can be created to a terminal program used by the caller. RIPscrip does exactly that by representing graphics with a series of commands for drawing circles, lines, boxes, fills, etc.

RIPscrip is a text based Script language for displaying online graphics and allowing a caller to make selections using a mouse. The script language conforms to 7-bit ASCII, avoiding the use of Extended ASCII characters. This allows transmission over X.25 networks and other carriers that do not support full 8-bit binary transfers easily. RIPscrip allows RIPscrip graphical statements to be mixed with printable ASCII text, ANSI/VT-100 directives and *WILDCAT!* @ codes. RIPscrip can dynamically determine what is graphics and what is text and display them appropriately in separate windows (a graphics window and a text window).

Requirements

First, RIP is totally optional. In order to offer RIP graphics to callers you must create appropriate RIPscrip display files and enable RIP support in MAKEWILD General Information Part 3. We have included a complete set of RIPscrip example display files with *WILDCAT!*, but some may require modification prior to use for your specific BBS. More information on revising .RIP files is contained later in this document. The most common program for creation of graphic RIPscrip screens is RIPaint from TeleGrafix Corporation although others are available.

In order to create or modify RIPscrip graphic screens you must use RIPaint from TeleGrafix Corporation or some alternative. Adding RIP support to a BBS is an optional activity, and the tools required to customize the screens are not included in the WILDCAT! package. The investment of time and money into this technology is a decision to be made by each individual sysop.

In order for callers to receive RIPscrip graphics they must call your BBS using a terminal program capable of interpreting RIPscrip commands. At the present time the two most popular such programs are RIPterm from TeleGrafix Corporation and *QmodemPro*. Your callers must also have an EGA or VGA monitor.

Implementation Notes

The goal for RIP implementation in *WILDCAT!* was to create an environment where the caller could make use of a mouse for as many BBS operations as possible, and to allow the sysop to replace as many display, menu, help and other files as possible with RIP counterparts.

During our implementation of RIPscrip we found that modifying a BBS system to work properly with the RIPscrip protocol required us to make a number of decisions about how our current display file mechanisms would operate in the RIP environment. After trying a number of different alternatives we settled on a set of rules for RIP display file implementation that are outlined in detail in this document. In addition, we learned that any sysop interested in implementing RIPscrip on their BBS must become at least casually familiar with the workings of the RIPscrip language in order to create a BBS with smooth flow of graphics and text. The majority of this document is an attempt to pass along this information to help you create a system using RIPscrip display files and commands.

In order to implement RIP on your BBS you need to make a conscious decision to learn at least the basics of the RIPscrip command language and RIPaint or other RIP design program. It is beyond the scope of this document or our technical support department to help with creation or modification of .RIP display files.

Auto-detection

WILDCAT! can auto-detect when a caller is using a RIP-capable terminal program immediately after connection, as long as the terminal program also supports RIP detection. This auto-detection works with v1.5.0 and later of RIPterm and with *QmodemPro*. Earlier RIPterm releases do not support auto-detect.

In addition to using a terminal program capable of interpreting RIPscrip commands, a caller must also turn on RIP in his *WILDCAT!* User Record. User Record field 6 under the Main Menu choice [Y]our settings now allows selection of No Color, Color, RIP Graphics or Auto-detect. The same options are available in the sysop menu user database in field number 24 for each user. We strongly recommend the

use of Auto-detect over RIP since callers can then switch modes without changing user record settings. Auto-detect is the default setting for new callers, and will enable RIP if RIP is detected, ANSI color if ANSI is detected and No color if nothing is detected.

Note - If a caller is using a RIP-capable terminal he must have his user record set to RIP or Auto-detect. Remember however that if a caller is NOT using a RIP-capable terminal but DOES have RIP set in his user record he will receive RIPscrip commands that will not be interpreted by his terminal program.

Since *WILDCAT!* now has more than just a yes/no choice for the issue of color, the prompts that control color selection have changed in the Questionnaires as well. MAKEQUES now allows asking a caller which type of display is desired, no color, color, RIP graphics or Auto-detect. If a caller is not prompted for color settings, Auto-detect is assigned.

Screen Display

When RIP display and menu files are being sent to a caller, the display on the sysop screen shows the raw RIPscrip commands and does not interpret the scripts or display them in graphic format. This handling of RIPscrip allows *WILDCAT!* to continue to offer full-speed operation and support for multitasking operations. The sysop status line now contains an indication of the last display file sent to the caller for reference.

Lines per Page

The caller's setting for "lines per page" is not used with RIP since *WILDCAT!* knows the exact size of the text screen set by the last RIP command. In addition, the @NOPAUSE@ command is not needed for long RIP files since RIP coded lines are not counted by the display routines and a pause prompt will not be generated.

How to turn on RIP Graphics

1. In MAKEWILD General Information Part 3 answer YES to the question asking if you want to enable RIP graphics support. Until you do so RIP will not be available to your callers.

2. Make sure you have appropriate .RIP versions of all display, menu help, bulletin and other files. The files shipped with *WILDCAT!* may or may not be appropriate on your BBS depending on the layout of your screens, menus and other options. Obtain a RIP drawing program and become familiar with the RIP commands and tips presented later in this booklet.

3. Tell you callers that they need to turn on Auto-detect (or RIP) in their user record if they want to see RIP graphics. They can do so with the Main Menu command [Y]our settings.

4. Test your implementation extensively. A single misplaced text window command (or the omission of the same command) can cause callers to see nothing more than a blank screen!

File Creation Tips

This section reviews how to create the various files that can be used in a RIPscrip environment.

Display Files, Menu Files, and More.

Any *WILDCAT!* display file can be created with an extension .RIP and will be sent when RIP is enabled and turned on in a caller's user record. The .RIP files are located in the same directories as their .BBS and .SCR counterparts. Menu files, Help files, Bulletin files and Questionnaire files can all be created with RIPscrip commands, and must have the extension .RIP and be located in the correct file path. Note that this file naming convention can result in duplication of file names for help, display and menu files (MAIN1.RIP can be the name of a help file, a display file or a menu file depending on the directory in which it is located). If a needed file does not exist with a .RIP extension *WILDCAT!* displays the .SCR or .BBS version in its place. Many sysops will find that a mixture of graphic files and text files provides the proper mix for a pleasing effect. We have included a full set of .RIP files.

Sample RIP Files

The full set of RIPscrip commands are defined in the documentation provided by TeleGrafix Corporation, but a short overview will be given here to help with your understanding our the discussion to follow. As indicated previously, .RIP files are nothing more than a series of text commands sent to the caller that tell his RIP terminal program how to draw an object on screen.

Graphic Files

One of the common types of RIPscrip files is a full-screen graphic that allows the caller to make a screen selection. Menus and some display files might fall into this category. A sample full graphic .RIP menu file might look like:

```
!|*|1K|w0000000000|1B00000200LC030F000F080700000F07000000|W0|Y00000100
!|1U0378HP890000<>|c0C|=00000003|L5L02HQ02|c0E|L5W09HQ09|c0B|L690GHR0G|c0A
!|L600NHR0N|c0D|L6Z0UHQ0U|c0C|Y01000400|@9118@BBS@
!|1B00000201F603010F0F080700020407000000|Y01000100
!|1U0D7F4A832500<>Message Menu<>M^M|1U4N7F8K831Y00<>File Menu<>F^M
!|1U8X7FBY832200<>Join Conf<>J^M|1UCB7FEZ831Z00<>Goodbye<>G^M
!|1UFC7FHE831R00<>? Help<>?^M|1B00000301DU030E0F0F080700020C07000000
!|1U1E2W1Y3C1U00<>Bulletins<>b^M|1U1E3K1Y402H00<>Your settings<>y^M
!|1U1E481Y402B00<>System stats<>s^M|1U1E4W1Y5C2600<>Newsletter<>n^M
!|1U1E5K1Y602000<>Help level<>h^M|1U1E681Y601V00<>Comment to sysop<>c^M
!|1U962W9Q3C2100<>Initial welcome Screen<>I^M|1U963K9Q402F00<>Who's online<>w^M
!|1U96489Q402C00<>Talk to other nodes<>t^M|1U964W9Q5C1W00<>Doors<>D^M
!|1U965K9Q602E00<>Verify a username<>V^M|1U96689Q602900<>Questionnaires<>Q^M
!|Y01000400|c0F|@0R06Main|@0R0W  Menu|#|#|#
```

Each line must begin with a ! character. Each RIPscrip command begins with the | character, and multiple commands can be placed on a line. The first line in the previous example sends the command |* which tells the terminal to clear all windows (graphic and text). The next command |w0000000000 tells the terminal to set a text window at some specified screen coordinates, in this case all zeros disables text display. Our RIP menu files disable the text window to keep the screen from showing the Menu ? prompt and the caller's keyboard selections if the mouse is not used. You may elect to provide a text window somewhere on your menus, this is entirely a personal preference.

Further down in the example is the |1B command, used to define how buttons should look and act when selected. The |1U command creates a button of a specified dimension with predefined clickable regions, colors and other properties. The combination of all the commands tell it to create graphic buttons with the appropriate names and click regions for the Main Menu. The previous menu is fully graphical when interpreted by a caller's terminal with RIP support.

Fortunately you don't have to know these commands to create RIP screens. The RIPaint program does much of the work for you and displays your creations in full graphics for editing. However, you do need to learn some RIPscrip details if you expect to create well integrated text and graphics.

Text & Graphic Files

Another type of .RIP display file is one that combines both graphics and text. For example, when someone is reading bulletins or help files it would be nice to have them displayed to the caller and scroll inside of a graphic border. To create this effect you must create a .RIP version of your Bulletin Menu that defines the graphic border and the area inside the border to contain the text.

In the example that follows, the file BULLETIN.RIP sends the commands necessary to draw the graphic border and then sets up a text window the size of the dotted area and sends the plain bulletin menu text. Until a new text and graphic window is defined, all text sent to the screen, such as the bulletins selected by the caller, will scroll within the text window while the graphic remains on the caller's screen. A small text area can hold a full 25 line by 80 column of text when the Micro ANSI font is specified for the text window. The standard 43x80 EGA font is another alternative that allows for a graphic border at the top and bottom of a screen and still has room for a full 23 lines of text. Regardless of the size you specify to a text window in a RIP file, *WILDCAT!* will handle scrolling and pause prompts as needed. The user's "lines per page" is ignored during RIP displays. In the following example the graphic screen borders are part of the BULLETIN.RIP file:

Here is what the actual text file BULLETIN.RIP might look like:

```
!|*|1K|S0107|B0K0GH87C|S010F|p040K7C0A7K0A080K0G|p040K0G0A08HI08H80G|S0108
!|p04HI08H80GH87CHI7K|p04HI7KH87C0K7C0A7K|S0100|B0U0OGY74|c08|LH80GGY0O
!|L0K0G0U0O|L0K7C0U74|LH87CGY74|LH87CHI7K|LH87CHI7K|c0F|LH87CHI7K
!|1B00000200LC030F000F080700000F07000000|Y00000100|1U0B7RHJ8N0000<><>|c01|W0
!|Y02000500|@4D7ZMSI   Redefining Telecommunications in '93|c04|@557Z-
!|w05042D0U11|#|#|#
@0F@    +-------------------------------------------------------------------------------------+
    |                          Bulletin Menu                                  |
    |  @0E@[@8F@1@0E@] - Where can I purchase @0F@WILDCAT!@0E@ and@0F@ QMODEMPRO@0E@?          @0F@|
    |  @0E@[@0F@2@0E@] - @0F@WILDCAT! v.3 @0E@Cost, Update, & Order Information                @0F@|
    |  @0E@[@0F@3@0E@] - @0F@WILDCAT! @0E@quotes - What the users think.                       @0F@|
    |  @0E@[@0F@4@0E@] - @0F@WILDCAT! v.3 @0E@Feature Highlights                               @0F@|
    |  @0E@[@0F@5@0E@] - @CE@  NEW  @0F@ WILDCAT! Intelligent Multi-Port Version!              @0F@|
    |  @0E@[@0F@6@0E@] - Information on @0F@wcMHS@0E@, the MHS gateway for WILDCAT!            @0F@|
    |  @0E@[@0F@7@0E@] - Information on @0F@wcPRO!@0E@, the utilities for WILDCAT!            @0F@|
    |  @0E@[@0F@8@0E@] - What is @0F@WILDCAT! Test-Drive@0E@?                                  @0F@|
    |  @0E@[@0F@9@0E@] - New User Information and operational procedures                       @0F@|
    |  @0E@[@0F@10@0E@] - @0F@Phone numbers @0E@and modem types on the HQ BBS                  @0F@|
    |  @0E@[@0F@11@0E@] - @0F@BBS Server (tm) @0E@and hardware on this system                  @0F@|
    |  @0E@[@0F@12@0E@] - @CE@QmodemPro @0E@ Information @0F@The new release with OLX v3!      @0F@|
    |  @0E@[@0F@13@0E@] - @0F@Qmodem v4.5 Test-Drive@0E@ Information                           @0F@|
    |  @0E@[@0F@14@0E@] - @0F@SLMR @0E@ information                                            @0F@|
    |  @0E@[@0F@15@0E@] - @0F@MSI Monitor@0E@ Newsletter, Vol. II, Issue 1                     @0F@|
    |  @0E@[@0F@16@0E@] - QmodemPro v1.02 and OLX v3.02 free upgrade available                 @0F@|
    |  @0E@[@0F@17@0E@] - Mustang's Show and User Group Schedule.                              @0F@|
    |  @0E@[@0F@18@0E@] - @CE@Demo for RIP callers ONLY!@0E@ Requires RIP to view.             @0F@|
    +-------------------------------------------------------------------------------------+
```

Notice that the first few lines are the RIPscrip commands to set up the graphic border. One of the last commands you see is the one to create the text window (|w05042D0W11) which tells the caller's terminal where to put text when it comes across the screen. In this case, the text window has been defined to match the area in the center of the screen in our example.

In the sample .RIP files included with *WILDCAT!*, almost all display files contain a series of RIP commands to set up a graphic with a 80x25 text window using the MicroANSI font. The RIP code necessary to do so is very small and is simply attached at the beginning of the standard .BBS file to turn it into a BULLETIN.RIP file.

Please note that any display file called from a graphic menu with no text window defined will not display unless it defines a text window of its own! This is an important rule to remember, and is covered again in the next section.

Menu Choice Action

When a graphic menu is displayed on a caller's screen (such as our Main Menu example), there is often no text window defined to receive text from a subsequent menu choice. This is intentional to keep the menu ? prompt from appearing over the graphic screen. When a menu choice is selected by a caller, *WILDCAT!* responds

(depending on what is chosen) by sending a display file or sending the text of the command or a prompt. If a display file is available for the menu choice selected, *WILDCAT!* will look to see if a .RIP version of the display file is available.

If there is a .RIP version of the display file it is sent to the caller, and ***it is assumed that the display file will clear the menu graphic and create its own text window, if needed.***

If there is not a RIP version of the display file available, *WILDCAT!* sends the .SCR or the .BBS version of the display file. However, before doing so it ensures that a text window has been established by sending a NEW display file called **POSTRIP.RIP**.

The purpose of POSTRIP.RIP is primarily to clear the screen and establish a window for any text that may be sent by *WILDCAT!*. The reason for sending it whenever an appropriate .RIP display file isn't located is to make sure that the text of the .BBS display file is displayed in a text window and can be seen by the caller. A sample POSTRIP.RIP is also distributed with *WILDCAT!*. The only requirement for POSTRIP.RIP is to clear the screen and send a text window command and text font to be used. As you can see from our example POSTRIP.RIP file, we have added a graphic border to the file and specified the Micro-ANSI font in a centered text window.

A two-part example best illustrates this process.

Lets assume a sysop creates a graphic Main Menu with mouse-clickable boxes for every available choice. If the caller selects B for the Bulletin menu, *WILDCAT!* looks to see if a BULLETIN.RIP file exists, and sends it, assuming that it begins with some RIP commands to clear the screen and establish a text window (as our example did). If it doesn't exist, *WILDCAT!* sends POSTRIP.RIP followed by BULLETIN.BBS.

The text of the bulletin menu and subsequent bulletins that are read are viewed inside the text window established either by BULLETIN.RIP or POSTRIP.RIP, whichever is sent.

The advantage of having a BULLETIN.RIP file with a text and graphic window is that the beginning of the display file can send graphics to indicate that the bulletins are being viewed, and they will remain the graphics used until replaced at the end of reading bulletins. Likewise, the Questionnaire menu (QUESTION.RIP) can have a graphic that indicates the caller is in Questionnaires. If the .RIP versions of BULLETIN and QUESTION don't exist, the standard POSTRIP.RIP is used sent to provide the text window and optionally a graphic as well. In addition, mouse click areas can also be established in a .RIP display file.

On the other hand, if the caller's menu selection is Y for Your Settings, there is no graphic .RIP file to send to the caller. In cases such as this where there is no display file available, the POSTRIP.RIP file is sent automatically by *WILDCAT!* to ensure

that there is a text screen defined for the text. There are a number of menu choices that are not associated with display files, and POSTRIP.RIP is used in all such instances.

There are only two exceptions to this rule. The menu choices for DOORS and MENU HOOKS are *always* preceded by POSTRIP.RIP to ensure that a text screen is established. Your display file DOORS.RIP will be sent after POSTRIP.RIP if it exists, but does not need to clear the screen or establish a text window. In fact, if your DOORS.RIP file does start with a RIP clear the screen command the caller will see POSTRIP.RIP for a split second followed by its replacement with DOORS.RIP.

Note that standard doors can be run in RIP mode since the ASCII/ANSI door text is sent to the caller and will be displayed on the screen in the text window defined by the last RIP command.

Customizing .RIP Files

As we mentioned earlier, in order to create a combination of graphic and text screens, you as a sysop must become familiar with the RIPscrip language to some degree. There are several RIPscrip commands that you need to be able to recognize in order to be able to manually edit your RIPscrip files. You need to become familiar with the following list of commands which are presented without the ! or | symbols for clarity. Remember that in a RIPscrip each must be preceded by | and the line must begin with a !.

* ..... Clears all graphic and text screens.

w#### ..... Text window command with location

B#### (or 1B) ..... Button definition command

U#### (or 1U) ..... Button draw command

A complete list of RIPscrip commands is available in the RIPSCRIPT.DOC file that accompanies the RIPaint program.

Here are some tips to help you create the best display files possible:

1. *How to avoid displaying text information over graphics, and keep files pacing properly.*
   When creating .RIP files for your BBS it is important to keep in mind the order in which files will be displayed. For example, if you intend to have several full-graphic HELLO#.RIP files you need to provide a mechanism to have the caller indicate when he has finished viewing the first file and wants to go on to the second. One way to do so is to create HELLO1.RIP with a 'Continue' button at the bottom of the screen. Set the button to send the character 'C' followed by ENTER (control M, indicated by ^M) and save the HELLO1.RIP file. Once the

file is saved you need to edit it (you can use *wcDRAW*) to place a @PAUSE@ command immediately after the button draw command. In the editor the last few lines of your file should look similar to the following:

```
...
!|1B00000201DY0301000F080700000F07000000|Y00000100
!|1U6A87AE8P0000<>Continue<>C^M
```

Add the @PAUSE@ on the line after the button draw command:

```
...
!|1B00000201DY0301000F080700000F07000000|Y00000100
!|1U6A87AE8P0000<>Continue<>C^M
@PAUSE@
```

For your last hello file (or if HELLO1.RIP is the only one you have) you should use RIPaint to establish a text window at the end so there is a place to display the prompts that follow. In this case your HELLO#.RIP file might look something like this:

```
...
!|1B00000201DY0301000F080700000F07000000|Y00000100
!|1U6A87AE8P0000<>Continue<>C^M
@PAUSE@
!|w03002A1211|#|#|#
```

Notice the !|w command to set up a text window is located after the @PAUSE@ command and the 'Continue' button. In this example you should insert the @PAUSE@ prompt after the button but before the window command. In Addition, you should add a RIP command to clear the screen (|*). We've combined both the clear screen and window commands in our example:

```
...
!|1B00000201DY0301000F080700000F07000000|Y00000100
!|1U6A87AE8P0000<>Continue<>C^M
@PAUSE@
!|*|w03002A1211|#|#|#
```

When this revised file is read from the disk, *WILDCAT!* sends the graphics up to the point of the button, then it pauses because of the @PAUSE@. The caller gets the entire graphic screen including the button labeled 'Continue', and *WILDCAT!* waits until the caller sends a command to start again by clicking the button (or pressing C, S or N for continue, stop or nonstop). When the button is clicked, the caller's end sends C^M (C followed by ENTER) which tells *WILDCAT!* to send the rest of the file. The screen is cleared of graphics and a text window is established. This use of a 'Continue' button is appropriate for a number of display files.

2. *How to add mouse-sensitive screen regions to display files.*

Often times you will want to create a screen and allow a caller to use the mouse to click on text areas to make selections. This is a fairly simple process once you learn the RIPscrip commands for mouse regions.

Our previous Bulletin Menu is a good example of a screen where you may want a caller to be able to select a bulletin by clicking on the menu text (not the graphics) with a mouse. To do so you must add codes to the BULLETIN.RIP display file text indicating where the mouse region starts and ends. The syntax used to define a mouse region for RIPscrip is as follows:

```
^R#<char>.....^R
```

or

```
^S#<char>.....^S
```

The difference between ^R and ^S is that one sends a C/R after the character and one does not. This difference is important since callers with hot-keys turned on do not want a C/R sent after *some* keystrokes.

Rather than burden the sysop with choosing the correct control character (^R or ^S), *WILDCAT!* can make the decision for the sysop. However, in order to do so the sysop must use a different control character when creating RIP files, one that *WILDCAT!* can recognize and then substitute the appropriate RIPscrip control character. We have chosen ^T as the substitute character, and it follows the same syntax:

```
^T#<char>.....^T
```

The ^T is the Ctrl T character (it looks like a paragraph marker), the # is the number of characters to be sent when the region is clicked and the ‹char› represents the characters to send to the host. The .... is the actual text of the BBS prompt that represents the mouse region.

For example, the following text prompts can be made mouse-sensitive as follows:

```
(before)     [15] - This is Bulletin number fifteen.

(after)      ^T215[15] - This is Bulletin number fifteen.^T
```

The characters immediately after the ^T indicate that there are 2 character to be sent and that the characters to be sent are 15. The entire text is a mouse region. The ^T characters and the numbers 215 are NOT displayed on the caller's screen.

You can even create display files using text instead of graphics by simply modifying your standard display files to create .RIP versions. We have included standard ANSI menus with this type of conversion in the 3.9 package. The following is an example of part of a Main Menu with mouse regions added:

```
^T1MMessage Menu^T   ^T1HHelp Level^T

^T1CComments^R       ^T1NNewsletter^T
```

Note that the ^T character cannot be entered by using the ^ and T characters as we display it in this text. The character 'CONTROL T' looks like a paragraph marker and is entered in most editors by pressing Ctrl P followed by Ctrl T. The ^P character tells the editor to interpret the next character as a literal and place it in the document. The *wcDRAW* program fully supports entering Ctrl T in this manner.

Although ^T is not a part of the RIPscrip language, *WILDCAT!* will automatically change every ^T to either a ^R or ^S before sending it out to the caller.

3. *How to add an icon to a display file.*

If you intend to add icons to your .RIP files you must remember that, unlike a standard .RIP file that sends the caller all the information necessary to draw your graphic, a file with an icon in it simply tells the caller's terminal program to display the icon on his screen at a specified position. It assumes that the caller already has the icon that your .RIP file references. If the caller doesn't have it already then nothing is displayed except a dotted line indicating the icon wasn't found.

Icons are useful for creating fancy complex screens, but the sysop must make the icons available for the caller to download so that they exist on the terminal end. The creation of icons is beyond the scope of this document and is covered in the RIPaint program. There are also several conversion programs to create icons form other bitmapped file types in the RIPaint product. Auto-download of ICONS is planned for future releases.

Internal Prompts

When RIP is activated *WILDCAT!* uses a different prompt file for its internal commands. This is an automatic process, but in the event you want or need to modify the prompt file it is called WCTEXTR.DAT as opposed to the standard prompt file WCTEXT.DAT. *Tomcat* also makes use of a RIP-specific prompt file called TCTEXTR.DAT. Both can be edited using MKWCTEXT.EXE.

The differences are primarily the inclusion of RIPscrip commands to enable mouse support. Many prompts have been changed (some remain unaltered because no mouse commands were needed) to contain RIP commands to identify where the

mouse click region begins and ends as well as what commands are sent to the BBS when the mouse area is clicked on the caller's end. These changes were made using the same process as described above in the discussion about adding mouse regions to display text.

RIPscrip Contact Information

For more information on RIPaint, RIPterm or RIPscrip development tools, contact:

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Chapter 6
Menu Functions

"I never did anything worth doing by accident; nor did any of my inventions come by accident; they came by work."

Thomas Alva Edison

In this Chapter...

- *WILDCAT!* menus
  Item by item explanations
- Main Menu
  The "Lobby"
- Message Menu
  The "Post Office"
- File Menu
  The "Library"
- Sysop Menu
  The "Command Center"

Menu Structure

The previous chapters focused on system requirements, setup and file structure. You now move on to actual system operation and command structure. Note that *WILDCAT!* automatically monitors the "inactive" time when a user is logged on via modem and disconnects after 5 minutes. A warning is issued after 4 minutes. The inactivity timer is disabled for local logins.

There are four major menus available in *WILDCAT!*, each containing a number of very straightforward selection options. The titles, prompts, text and descriptions for the various options could differ from one *WILDCAT!* installation to another. Those discussed here represent the default *WILDCAT!* setup. In actual operation you may rename any menu function to your liking.

Main Menu

Since the MAIN menu is always the first encountered following logon, as well being a gateway to other areas of the system, the discussion will start here. The menu choice selections are presented in alphabetical order for easy reference, rather than the MAKEWILD order.

[1] Sysop menu

The SYSOP menu is displayed.

[B] Bulletin menu

When the "B" option is selected, the file called BULLETIN.BBS is displayed to the user. The Bulletin menu could be considered a sub-menu of sorts, in that it presents the user with the options of reading one or more bulletins by selecting a bulletin number, re-listing the bulletins that are available for display, or simply returning to the MAIN menu. If any bulletins have been updated since the user's last logon, the user is presented a listing with those bulletins by number, and an opportunity to read only new bulletins.

[C] Comments to the sysop

This choice allows users to enter a *private* message to the system operator. *WILDCAT!* makes these comments an integral part of the message base for easy reply, if desired.

[D] Doors

Displays the file DOORS.BBS (.SCR) and prompts the user for a selection. See *Chapter 7 — Features in Depth* for additional information on door operation.

[F] File Menu

Displays the File Menu.

[G] Goodbye & Logoff

If a user's current help level is set to NOVICE mode, choosing the Goodbye option is followed by the confirmation prompt "Are you sure?". If the user responds with a Y, then normal log off procedures are begun. Otherwise *WILDCAT!* assumes the command was entered in error, and returns to the then current menu. Once a user changes help levels to REGULAR or EXPERT, this extra prompt is no longer displayed.

The Goodbye command is available in ALL major menus and performs exactly the same way in every menu.

[H] Help Level

WILDCAT! supports three different levels of menu prompts:

[N]ovice—The first and the default value for new users is the Novice level. At this level, the user is presented with full dynamic menus with a command line prompt containing the name of current menu area, and the first character for a particular option in the current menu. Sysop-defined .BBS or .SCR menus are displayed in their entirety.

[R]egular—The second level is the Regular level. At this level only the command line is shown along with the name of the current area. No menus are displayed at this level.

[E]xpert—The final and highest level is Expert. At this level only the area of the system is displayed. No menus or letter designators appear.

The Help level command is available in ALL major menus and the usage is exactly the same in each.

[I] Initial welcome screen

Contents of the HELLO1 through HELLO9 files are re-displayed to the caller, with screen pauses determined by the user's page length setting and any @PAUSE@ codes in the files. In addition to the HELLO screens, other logon display files are also displayed. Sometimes a user will stop the original display of one or more of these files using the SPACE or CTRL K, then later may wish to review the contents of these entry-level display screens. The "I" option permits doing so

without the user having to log off and then call again. In addition, if you have a fancy color logon screen in one of your HELLOx files, you might be surprised to see how many users will display the file over and over after logging on.

[J] Join conference

Join conference allows a caller to change the active message area to any other available on the system. Since paths for menus, display files and questionnaires can be different for each conference, this can result in one or more conferences having its own complete set of information that is different from every other conference on the BBS.

Note that it is not necessary to change to each conference in order to read messages since the Read command allows automatic reading across conference boundaries. For additional details see the Message Menu commands *Read* and *Update Conference Scan/Read*. This command is active on all menus.

[M] Message menu

The MESSAGE menu is displayed.

[N] Newsletter

Displays the contents of the NEWSLTR.BBS file to the user with screen pauses. As mentioned in the configuration/setup instructions, this option may be called anything you like, and the contents may be anything you wish, but the display file itself must be called NEWSLTR.BBS.

[P] Page the sysop

This selection is used for the caller to page the system operator. Pages are answered using the F6 key. The response of the local system to a page request may vary depending on whether the current time is within the sysop's paging hours, whether the page override toggle is on, and whether the page bell is turned on or off.

If a page is answered the sysop can type directly to the caller from the local keyboard. The entire text entered during the "conversation" between the sysop and the caller is recorded in the capture file PAGED.CAP. The text of each successive page session is appended to the last session by default.

If *WILDCAT!* has detected that the caller has ANSI enabled, the chat will take place in split-screen mode for both the caller and local sysop. If the page is not answered, the caller is offered the option to immediately enter the message editor and leave a comment to the sysop regarding his page. If entered, the message is routed as a comment to the conference sysop with a subject line of "Question".

[Q] Questionnaire

Presents the screen menu QUESTION.BBS (similar to the bulletin menu BULLETIN.BBS) and asks the caller which questionnaire to answer. A sample newuser questionnaires and an order questionnaire are included.

[S] System statistics

This menu choice displays the file named WCPRO.BBS (or WCPRO.SCR for color callers), which might contain statistical information about your system. If you use *wcPRO* (a separate program available from Mustang Software) it automatically creates a statistical analysis file for this prompt. In the absence of WCPRO.BBS or .SCR, a display is generated for the caller indicating basic information about the system, including the start date, number of callers, users and files.

Remember, you may easily rename the menu prompt for this command (or any others) and have it display any information desired. For example, if you need a second display file similar to the newsletter, you might call this [L]ate breaking news and place your news text in the file named WCPRO.BBS.

[T] Talk with other node(s)

If a multiline (multi-node) system is in operation this choice allows users to enter into private and group chat with other nodes. A sub-menu is presented. Details of the inter-node chat function are contained in *Chapter 8 — Multiline Operation*. Single line systems should set the security for this function to a level higher than any user's access to disable the function.

[U] Userlog list

The caller is presented with the entire user list of the system, displayed in alphabetical order, along with the type of computer they are using, the date they last called and their "from" user entry. The usual screen pauses are in effect while using this option. A sysop may disable this (or any) menu option by setting the security level above the highest level used. Be certain to disable this feature if you have elected to lockout callers when they fail to properly answer security prompts. Otherwise you may find prank callers using this command to discover user's names and intentionally failing the password prompt to perform a lockout. In conferences making use of alias names this feature lists only the alias name, not the user's real name.

[V] Verify a user

A search can be made on any portion of any user name on the system. Pressing [V] brings up a sub-prompt to enter a name or partial name. At the sub-prompt, enter all (or portion of) a user's name. If an exact match is not found, *WILDCAT!* will ask if you want to see all the users whose last names begin with the first letter of the name in the search. The search is also insensitive to case.

[W] Who is online

Presents the caller with a list of the names logged on to other nodes sharing the same Node Information file. In a single user system, this choice is not available.

[X] DOS hook 1

Executes the batch file MAIN1.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named MAIN1.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name MAIN1.BAT for execution, using either a DOS shell or termination of *WILDCAT!*, as specified in MAKEWILD. The reason for this approach is explained in the following section. The .RUN file must be located in the Work directory for the node, and the .BAT file will be created and executed there as well. You will recall that each node has its own work directory located in the WCWORK subdirectory created by the *WILDCAT!* program.

If you wish all nodes to use the same MAIN1.BAT (or other DOS Hook batch file), you may place MAIN1.BAT in your C:\WC30 directory.

This DOS Hook will be executed in one of two ways:

1. Swap to DISK/EMS/XMS
If your system is set in MAKEWILD to make use of SWAP to EMS, XMS or DISK for all DOS hooks, the batch file will be automatically copied as indicated above and executed after swapping *WILDCAT!* out of memory. After completion, *WILDCAT!* is automatically reloaded after the last batch command. In this case, the MAIN1.RUN file should end *without* a line to recall *WILDCAT!* since swapping automatically restores the program back in from EMS or DISK. The MAIN1.BAT file is erased automatically when *WILDCAT!* is swapped back in as well. Using swap is the easiest method of executing this type of DOS shell or hook, and requires little sysop intervention. A sample batch file MAIN1.RUN might look like this:

```
ECHO OFF          prevents display to the screen
CD \MYPROG        changes to the proper directory
MYPROG.EXE        starts the program
CD \WC30          changes back to the WILDCAT dir.
```

Note that the batch file does not restart CAT.BAT or WILDCAT.EXE.

Swapping is controlled in MAKEWILD *General Information — Part 2* where it asks if you want to swap out during a DOS shell. The location of the swap (DISK, EMS or XMS) is controlled by another question in the same section.

2. Terminate

If you are not swapping to DISK, EMS or XMS, *WILDCAT!* must terminate and run the batch file. Prior to termination *WILDCAT!* will copy MAIN1.RUN to the correct name MAIN1.BAT for execution. When not using swap you must have started *WILDCAT!* using a batch file (CAT.BAT) that performs appropriate tests for the existence of MAIN1.BAT or the hook will not execute properly. The appropriate syntax for the test is:

This test tells your CAT.BAT file to look for the batch file MAIN1.BAT in the node work directory, and if it exists, execute it. A sample batch file to test for this hook might look like this:

```
ECHO OFF            prevents display to screen
:RESTART            label for restarting if needed
CD \WC30            changes to the proper directory
WILDCAT             starts the program
IF EXIST C:\WC30\...\MAIN1.BAT C:\...\MAIN1.BAT
          checks to see if the batch file was created in the node
          work directory and is present to run; if so, runs it
IF ERRORLEVEL 1 GOTO RESTART
          checks for error on exit and restarts this file at label
:RESTART            if the errorlevel was 1
ECHO ON             only gets here if F10 is executed.
```

Since the file MAIN1.BAT will be run if it exists, it must be responsible for restarting *WILDCAT!*, which has been terminated. For this reason, the batch file MAIN1.RUN for a system not making use of swapping during a shell might look like this:

```
ECHO OFF            prevents display to the screen
CD \MYPROG          changes to the proper directory
MYPROG.EXE          starts the program
CD \WC30            changes back to the WILDCAT dir.
CAT.BAT             restarts WILDCAT! since it was
                    terminated rather than swapped.
```

Notice that the last line restarts *WILDCAT!* using the CAT.BAT file, a necessity since the program was completely terminated.

For both DOS Hooks 1 and 2, the key used for execution should normally be changed to reflect a letter representative of the actual menu choice implemented. You are cautioned to avoid duplication of menu letter assignments already in use when making the change.

[Y] Your settings

A user is allowed to make changes to certain information in the User database. When [Y] is selected the following screen is presented:

```
Present setting for   : GWEN BARNES

[ 1] Password         : *****          Msgs written    : 0
[ 2] Computer type    : CompuAdd 386/33 No. of calls    : 11
[ 3] Phone number     : 805-395-0223   High message    : 0
[ 4] Birth date       : 10/03/54       User since      : 01/20/93
[ 5] Screen length    : 23             Last call       : 01/22/93 1:13pm
[ 6] Scrn display mode: Auto detect    Last new files  : 01/01/80 12:00am
[ 7] Erase prompt     : YES            Downloads       : 0 Files, 0K
[ 8] Hot keys         : YES            Uploads         : 0 Files, 0K
[ 9] Quote on reply   : YES            Acct balance    : $     .00
[10] Read message mode: Keep header    Netmail balance: $     .00
[11] Default editor   : No default
[12] File display mode: Double line
[13] Help level       : Novice
[14] Default protocol : All
[15] Calling from     : Mustang Software, Inc.
[16] Chat status      : Available

Setting to change [1..16], [H]elp? [  ]

 GWEN BARNES, Mustang Software, In (Local)                    Kybd
 Phone: 805-395-0223    Age: 38 Node: 28  Sec: SYSOP      Since: 01-93 Time: 18
```

From the sub-menu, the user may alter the items in the left column. In an alias conference an additional choice for alias name appears at the bottom of the list and the Chat status choice is only active in multiline installations. The right column, which is maintained by the system or the system operator, is provided as information for the user, and may not be changed by the caller.

Note that some items such as birthdate, phone and alias name may be configured to only allow changes with sysop approval. This is configured in the MAKEWILD *Security Information* section. In addition, the Alias field will only be displayed when [Y]our Settings is invoked from within a conference supporting alias names.

[Z] DOS hook 2

Executes the batch file MAIN2.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named MAIN2.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name MAIN2.BAT for execution.

Operation is the same as DOS Hook 1, and it requires a similar "if exist" test should it be implemented without the swap option enabled.

For both DOS Hooks 1 and 2, the key used for execution should normally be changed to reflect a letter corresponding to the actual menu choice implemented. You are cautioned to avoid duplication of menu letter assignments already in use when making the change.

[?] Help with Commands

There is a help screen associated with each major menu in *WILDCAT!* which more fully explains the options available. Many users will select this option as a "refresher course" after having toggled their expert level to REGULAR or EXPERT. The help files may be modified if desired, and are standard text files.

Message Menu

[1] Sysop Menu

Calls the sysop menu

[C] Check for personal mail

Lists all unread personal mail. To read your unread personal mail, select the [R]ead messages option.

[E] Enter a new message

Messages may be entered and saved into any conference, with the current conference selected as a default.

```
Enter conference, [L]ist, or [ENTER] = "001 - Private Mail"? [   ]
```

The user is then presented with the prompt:

```
To ([ENTER] = All)?  [                                  ]
```

At this prompt a user name may be entered and *WILDCAT!* will check the user database. An entry not in the database is allowed only if the conference configuration item "Valid name" is set to "No" or "Prompt". In an alias conference only valid alias names are accepted. A name not in the user database is acceptable when the conference is used for echomail or other wide-area communication where recipients of the message may have never called the system. In addition, messages to ALL are not allowed in a conference that forces all messages private. After entering a name the system prompts for the message subject and the user may enter up to 40 characters.

```
Subject  [                                        ]
```

If no subject information is entered, the message is aborted.

If no default editor has been selected, the caller is further prompted:

```
Full Screen Editor? [Y]
```

Note that the default is Y and that this choice is offered even if ANSI has not been auto-detected. Some communications programs offer ANSI routines that can make use of the editor, but fail to respond to the ANSI query properly due to incomplete ANSI implementation. It is up to the caller to determine if he has the capabilities to make use of the full screen editor properly at this point.

If a specific user name was entered (as opposed to the word All), the system then prompts whether the message should be made private:

```
Private? [N]
```

The default value is a public message, and it is skipped for mail addressed to ALL. Private mail is seen only by the sender and recipient, unless reading private mail is enabled for the sysop in MAKEWILD. This prompt is also skipped in conferences that do not allow private messages, and conferences which force all messages private.

WILDCAT! then prompts if a confirmation of delivery (return receipt) is needed:

```
Return receipt? [N]
```

This prompt only appears in conferences that allow return receipts. Again the default is N and is selected if the [ENTER] key is pressed. If Y is selected, *WILDCAT!* will watch for the message to be read by the recipient and automatically generates a message from the "*WILDCAT!* Mail Room" to the sender. This Return Receipt message indicates the date and time the message was received, and is addressed as private mail to the originator of the message. As soon as this Return Receipt message is read by the original sender on a later call it is automatically deleted by the *Wildcat!* Mail Room.

Message text entry follows. Message length is controlled by conference, and can be up to 150 lines long. If the caller has selected a default editor, either the full screen editor or the line editor, it is immediately invoked and message composition can begin. A full explanation of each editor is covered in the section *Message Editor Operation* which follows this section on menus.

A text import feature is available during message entry to add commonly used phrases or other text within a message. It consists of placing the two "import characters" << in front of a filename containing the text to be inserted. The file must exist in the message database path for the conference, and must end in the extension **.IMP** to operate properly. The text file may be of any length, since only the import characters and filename are stored in the *WILDCAT!* message base.

The import characters must be located at the beginning of a line, immediately followed by the text file name:

```
1: Here are a few suggestions:
2: <<HELP.IMP
```

The above example will result in the caller seeing line 1 of the message followed by lines 2-? (depending on the length of the import file) containing the text of the file HELP.IMP located in the path for the message database. As many import files as needed may be included in a message, and may be intermixed

with typed text. The actual text of the file HELP.IMP is *not* placed in the message database, but is dynamically incorporated and displayed to the caller as the message is read. Any @-macros contained in the text of the .IMP file will be translated when displayed, allowing the sysop to create personalized messages showing the user's own information or system information.

Although this feature is operational for anyone entering a valid import filename, it is usually used only by the sysop or other local login users who have access to place .IMP files in the message directory.

Full operational details of each editor are covered in the section *Features in Depth.*

After message entry is completed and corrections are made using the appropriate editor commands, the caller has several options. If additional recipients of the message are desired the Ca[r]bon Copy prompt can be selected after text entry by pressing [R]. This choice is only listed if carbon copies are supported in the conference. Doing so saves the main message and the carbon copy prompt is presented:

```
Message #4241 saved.
Carbon copy to ([ENTER] to end)?
```

As many carbon copies as desired may be sent.

For full editor details see *Features in Depth.*

[F] File menu

Presents the caller with the Files menu. This choice is available from both the Main menu and the Message Menu.

[G] Goodbye & logoff

Refer to the [G] option discussion under MAIN menu.

[H] Help level

Refer to the [H] option discussion under MAIN menu.

[J] Join conference

Refer to the [J] option discussion under MAIN menu.

[K] Kill a message

This is a routine for erasing old messages directly from the MESSAGE menu. It requires that (1) the message to be deleted is either *to* or *from* the user who is attempting to erase it, and (2) that the message number is already known. Messages may also be deleted interactively while reading them in the message

area. Raising the security of this menu option prevents callers at lower levels from deleting messages, even after reading them. This choice is available to the sysop on every message.

[Q] Quit to main menu

Exits the current menu and returns to MAIN menu.

[R] Read messages

A sub-menu is displayed with the following choices:

```
Starting from [22-1845], [H]elp, [N]ew mail, [S]earch, [U]nread personal, [J]oin,
or [ENTER] to quit (add * for snoop)?
```

This command allows you to select which messages you want to read. Reading can be done using a number of options, or may be as simple as using a single command to always read all new messages in all conferences.

[**22-1845**]—Allows you to enter a beginning message number from the message range available. Entering a number begins reading at that message and continues in a forward direction, reading newer messages in chronological order. You are prompted whether you want to read messages in [C]urrent, [S]elected, or [A]ll conferences after selecting a number to begin. The default when reading individual messages by number is the [C]urrent conference.

[H]elp—Displays help file to the caller.

[N]ew mail—Reads all messages that have been entered since the last time you read mail in the conference. A high message number mark is maintained for each conference, and all new messages can be read with the New mail command. You are prompted whether you want to read new mail in [C]urrent, [S]elected, or [A]ll conferences. The default for reading new mail is to read [S]elected conferences.

[S]earch—Search command brings up a sub-menu allowing you to search for messages based on a number of criteria. You may search based on text in the **From** field, **To** field, **Subject**, and Message **body text**. You may also start at any message number and search either forward or backwards directions. The Search command sub-menu appears as follows:

```
[F]rom       : <ALL>
[T]o         : <ALL>
S[u]bject    : <ALL>
Msg [B]ody   : <ALL>
[N]umber     : <ALL>
[D]irection  : Forward
[C]onference : Current

Search command [F T U N D B C], [H]elp, [Q]uit, [S]tart search? [S]
```

Messages found using Search are displayed with the full message text. The Search for Messages command on the message menu supports the same search criteria, but displays only header information, allowing you to MARK messages for later reading. The default Search criteria encompasses all messages, and can be narrowed by altering the individual fields. Note that the fastest searches make use of the From, To and Subject fields since they are indexed. Any searches for specific Msg. [B]ody text take much longer, and should be further narrowed if possible.

[U]nread personal—Reads all messages that are addressed TO you, and have not been read previously. This command is used to read *only* mail addressed to you that has *never been read previously*, and is often used to read personal mail at every logon. You are prompted whether you want to read messages in [C]urrent, [S]elected, or [A]ll conferences. The default is to read [S]elected conferences. Note that Unread personal mail will locate all messages to you that have not been flagged read, regardless of your last message read pointer. It scans all conferences, even those which are not included in your default conferences using the Update Conference command on the message menu.

[J]oin—This is the same as the [J]oin conference prompt on the Main, Message, File and Sysop menus.

Additional commands may appear on this line, depending on your security level and message reading mode.

[M]arked—Reads all messages that have been marked for reading. This command is used to read mail that you have marked while using the Scan command. It ONLY appears as a menu choice if messages have been marked previously using Scan. See [S]can for details.

(add * for snoop)—This menu selection is shown only to callers whose security profiles have Sysop or Master Sysop status. It allows you to read messages without giving an indication to your callers that the mail has been received. Your message pointers will not be updated when you read mail in "snoop" mode.

After entering a message read command, *WILDCAT!* displays a prompt to ask the user if messages are to be read in [C]urrent, [S]elected, or [A]ll conferences. The default is [S]elected for most reading options.

After reading a message the user has several options depending on the nature of the message, his security profile and whether the message is TO or FROM him. Note that not all of the following commands need to appear on the prompt in order for *WILDCAT!* to recognize and execute them. The complete range of possible options and the circumstances of their appearance is:

+/- The read command always assumes reading in a forward direction unless advised otherwise. Appending the - command indicates you want to read in reverse order.

Typing a character that is not a valid message reading command (for instance a "." or a ",") causes *WILDCAT!* to re-display the current message.

###—After each message a user may branch to another message by typing the number and pressing ENTER.

[A] The A or **ALL** command may be added to a command to extend reading to ALL conferences in your Conference profile, overriding a previous [R]ead [N]ew [C]urrent or [R]ead [N]ew [S]elected, for instance.

[E]dit—The ability to edit a message after reading is offered to the sender and those who have been given sysop mail reading privileges. Selecting the edit mode clears the screen and redisplays the message with the same prompts encountered when message entry is completed. The user may delete lines, insert lines, edit specific lines, change the subject, list the message and save a revised copy. A special help file is available within the edit function. When the edit is complete, the revised message is saved with an updated date and time stamp.

[F]orward—This choice sends a copy of the message to any other user on the system. It creates a message to the new recipient with a note indicating that it was originally addressed to another person and forwarded by the reader. Forwarding a message to ALL is a valid response which creates a public message to ALL.

[H]elp—Displays a help file.

[K]ill—The ability to kill (delete) a message is offered to the author, receiver and those who have been given sysop mail reading privileges, but only if they have been extended the ability to use the [K]ill message command on the message menu. When the kill option is used, the selected message is flagged as being deleted, but can still be read by the sysop if enabled in the sysop's user record. A deleted message is actually removed from the database when the sysop command [P]urge deleted mail is executed. If you want to prevent all callers from deleting any messages (even their own), simply set the security required for the Message menu [K]ill messages option higher than any caller.

[N]onstop—Selects nonstop message reading from the current message forward. It may be used to capture messages to a file for reading off-line, or to quickly move forward in the message base. Nonstop reading can be terminated with a tap on the [SPACE]. Note that nonstop reading while reading across multiple conferences will not stop between conferences.

[P]rint—This choice is offered to any user who logs on locally, either using the [F1] key or [ALT] [L]. A pop-up box will appear, prompting the user to input the device or file name to save. If a file name and path is entered at the prompt, *WILDCAT!* will save the message to disk. If the default PRN is selected, it prints a formatted copy of the current message to the printer.

[Q]uit—This choice returns the caller to the "Starting from" prompt, allowing them to search, read new mail, join a conference, and so on.

[R]eply—This choice is available on all messages unless the user's security level prohibits message entry by definition in MAKEWILD. A reply generates a message FROM the caller addressed TO the sender of the original message, with the option of changing the subject, if desired. The decision to keep or alter the subject is important since message threading is based on the subject.

[S]ysop—This choice is offered only to those with sysop privileges in the conference. When selected the user is presented with a sub-menu:

```
[P]ublic/Private toggle
[M]ove to conference
[C]opy to conference
[F]rom user edit
[T]o user edit
[A]ccess file database

Sysop command, [H]elp, or [ENTER] to Quit? [ ]
```

[P]ublic/Private changes the status of any message from public to private or vice-versa.

[M]ove to conference presents another sub-prompt:

```
Conference to move to [0-101], [H]elp, [L]ist, or [ENTER] to quit? [   ]
```

Moving a message to another conference actually copies the message as a new message in the destination conference message database (with a new date/time stamp), and deletes the original message. A conference listing is available using the [L]ist conferences command.

[C]opy to conference creates a duplicate of the message in another conference message database with a new date and time stamp. The original message is unaltered.

[U]ndelete shows up as a menu choice on messages flagged for deletion. This choice will flag the message as readable after having been [K]illed.

The next two choices, **[F]rom user edit** and **[T]o user edit**, display the user record of the sender or recipient of the message. Full database modification is allowed since this choice actually invokes the user database functions of the sysop menu. When the user database functions are complete, quitting the database menu returns to the message reading prompt.

[A]ccess file database takes you immediately to the file database to perform any maintenance desired, with immediate return when done.

[T]hread—This selection finds the next message in the "Thread", that is, the next message with the same subject line. You may thread backwards by adding a - (minus) character to your Thread command.

[S] Search for messages

Searching allows you to scan for and display message headers, and then mark selected messages for reading using the Read [M]arked command.

Selecting [S]earch presents the following sub-prompt:

```
[F]rom        : <ALL>
[T]o          : <ALL>
S[u]bject     : <ALL>
Msg [B]ody    : <ALL>
[N]umber      : <ALL>
[D]irection   : Forward
[C]onference  : Current

Search command [F T U N D B C], [H]elp, [Q]uit, [S]tart search? [S]
```

You may search based on text in the **From** field, **To** field, **Subject**, and Message **body text**. You may also start at any message number and search either forward or reverse directions. The default Search criteria encompasses all messages, and can be narrowed by altering the individual fields. Note that the fastest searches make use of the From, To and Subject fields since they are indexed. Any searches for specific Msg. [B]ody text take much longer, and should be further narrowed if possible.

Messages matching the criteria are displayed one per line with header information only. Each message is preceded by a reference number, and each screen of messages is followed by a -Pause- prompt that allows [M]arking messages for reading after the scan is completed. Multiple messages can be marked at one time by specifying the message numbers separated by spaces, or in groups such as 2 5 7-11 14 to indicate three individual messages and all those between 7 and 11.

[T] Tomcat off-line msg door

A special menu choice for enabling an off-line message reader. If used, it allows *WILDCAT!* to transfer control to another program to download messages. It operates in a manner similar to doors, and is explained more fully in the *Features in Depth* section. If not used, the menu access level for this function should be set higher than any security profile's menu level to disable access.

[U] Update conf scan/read

A sub-prompt similar to the following is displayed:

```
 0) * Private E-Mail              1) * General Public Messages
 2) * Political Debate            3) * Alias Conference
 4) * Wildcat! Support            5) * Qmodem Support
 6) * Off-Line Xpress support     7) * Sysops conference
 8) * Writers conference          9) * Administration
-Pause- [#-#], Select [a]ll, [D]eselect all, [H]elp, [S]top?
```

This option allows each caller to establish which conferences are searched by default when performing message functions in multiple conferences. Reading and scanning mail are two such activities. The default setting is "Selected" for all conferences to which access is allowed.

A caller may select or deselect individual conferences or groups of conferences by entering a single number or a range such as 3 or 3-7. [D]eselect all or [S]elect all affects all conferences, and toggles the selection marker accordingly. The presence of an asterisk indicates a conference is selected," and will be accessed whenever default conference names are used. If the asterisk is not present, the conference will not be accessed when reading or scanning messages in default conferences.

[X] DOS Hook 1

Executes the batch file MSG1.BAT which performs any desired activity. The batch file commands must be created as desired by the sysop in a file named MSG1.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name MSG1.BAT for execution.

Operation is the same as DOS Hook 1 choice on the Main Menu, and it requires a similar "if exist" test should it be implemented without the swap option enabled.

For both DOS Hooks 1 and 2, the key used for execution should normally be changed to reflect a letter representative of the actual menu choice implemented. You are cautioned to avoid duplication of menu letter assignments already in use when making the change.

[Z] DOS Hook 2

Executes the batch file MSG2.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named MSG2.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name MSG2.BAT for execution.

[?] Command Help

Refer to the [?] option discussion under MAIN menu.

File Menu

[1] Sysop menu

Refer to the [1] option discussion under MAIN menu.

[D] Download a file(s)

When a caller requests a download, he is asking to transfer a file from the BBS to his system. The download command supports batch transfers of up to 99 files, or up to the maximum number of files per day allowed by the caller's security profile, whichever is smaller.

When a download is requested *WILDCAT!* asks the caller to enter a filename, and checks to see that the name entered is available in the file database. If it is available and the user has access to the file area and enough credits (in a pay system), the request is accepted and a second filename is requested. This process is repeated until the caller leaves the filename prompt blank and presses ENTER or until the maximum number of files allowed by the caller's security profile is reached.

The caller is then asked if auto-logoff after completing the transfer is desired. If selected, a 10 second countdown is started immediately after the transfer is completed, and a [G]oodbye command is executed automatically if the log off is not aborted during the countdown.

After getting the filenames and log off option from the caller *WILDCAT!* asks for the file transfer protocol to be used to send the files. The choices available are displayed based on the sysop configuration and the caller's connection type. Connections using MNP or ARQ hardware error control are able to use the two additional hardware based protocols Ymodem-G and 1K Xmodem-G.

Note that batch file transfers are supported even with protocols such as Xmodem that do not traditionally allow more than one file at a time. For these protocols the files are sent sequentially, one after the other, but require the caller to initiate a new download on his end for each file, since the automation is only active on the *WILDCAT!* end.

Immediately after protocol selection the transfer begins. From that point forward it is the responsibility of the caller to properly initiate the transfer on his communication program. A pop-up window is displayed on the local monitor indicating the progress of the transfer.

When *WILDCAT!* is run locally without a modem connection the download function remains operable. Instead of requesting the file transfer protocol to be used it requests a full path name as a location to copy the files. The "download"

proceeds by copying the files from the BBS path to the location specified by the user.

[E] Edit marked list

When viewing a list of files available using the [L]ist or [S]earch commands, a caller is able to mark files for download by number, avoiding the necessity of entering the filenames at the Download prompt. The list of marked files can be edited when the download is requested, or directly from the menu using this option. Selecting this menu choice displays a sub-menu allowing adding to the list, removal from the list and clearing the entire list. If no files have been marked previously, the list is empty, but files can still be added to the list using the [A]dd file choice. This function has its own help file detailing the full operation of removing items from the list, clearing the entire list, and adding files.

[F] File transfer info

Displays a file called PROTO.HLP. The usual screen pauses are in effect. This option presents the caller with a more detailed discussion of the many differences in upload and download protocols and procedures.

The text contained in the display file PROTO.HLP should be edited to reflect not only *WILDCAT!*'s internal protocols, but any external protocols added by the system operator.

[G] Goodbye & logoff

Refer to the [G] option discussion under MAIN menu.

[H] Help level

Refer to the [H] option discussion under Main menu.

[I] Information on a file

Results in a sub-prompt requesting a filename, and presents the caller with detailed information about the file.

[J] Join conference

Refer to the [J] option discussion under MAIN menu.

[L] List available files

Presents a sub-prompt asking which file areas should be listed.

```
File area [1-16], [L]ist, [H]elp, [Q]uit, [ENTER = All]?
```

File areas may be selected either alone or in groups. Entering 2 4 5-7 will list the files available in areas 2, 4, & 5 through 7. Spaces or semicolons may be used as a delimiter in the sub-prompt. Only file areas designated as being available in the conference will be listable, and all areas may be listed by pressing ENTER

The list format will make use of the caller's default listing preference, either single line (one file per line), double line (two line descriptions, including size, date and download time), or full file information. Full information can occupy 10 or more lines per file, depending whether an extended description is attached or not. The user default list format may be overridden by adding the letters S, D, or F to the request to force **S**ingle, **D**ouble or **F**ull list formats. An example listing to list only areas 2, 4 and 5 through 7 in full format would be:

```
Areas (1..16) [#, #-#], [L]ist, [H]elp, [Q]uit, [ENTER]=All? 2 4 5-7F
```

Files are displayed in order by file area, and in alphabetical order within each area. To view files by date order, use the [N]ew files command and select the starting date as desired. One line, two line and full page description formats are available.

[M] Message menu

Presents the Message menu, without having to go through the main menu.

[N] New files search

Displays a sub-prompt requesting the date to use as a basis for the search. The default date is the last time the caller used this particular option, not the last logon. A user can logon for weeks, even months, and providing the N option is not selected during a particular logon, the default date will not be changed. A user may manually enter any date from which to start a new files search, or select [D]ays old and input a number, allowing a display of all files added since any date desired.

After entering the starting date the caller is asked to select which file areas should be scanned. The prompt for this is the same as the one listed previously for the [L]ist files command.

[P] Personal file statistics

The Statistics selection presents the caller with a complete summary of file information for both the system as well as personal file database activity and limits.

[Q] Quit to main menu

Exits the FILE menu and returns to MAIN menu.

[R] Read a text file

A sub-prompt requests the name of any ASCII file listed in the file database. The selected text file is displayed with appropriate screen pauses. Filenames which are obviously not in ASCII format such as .COM, .EXE, .ARC, .ZIP etc. are accepted at the sub-prompt, but a warning is issued that the file may be unreadable when displayed. Embedded codes are properly interpreted if found in the file.

This menu option could easily be renamed to function as a list file command for systems which make use of many text files, or to easily display text files for preview prior to downloading.

[S] Search for files

This menu choice is used to search for files by name, keyword, the entire descriptive text, or the name of the person who uploaded the file. When this choice is selected the user is presented with a sub-prompt allowing several types of searches:

```
[N]ame              : *.*
[K]eyword           : <All>
[D]escription       : <All>
[Uploaded by : <All>

[L]isting method    : Single line

Search command [N K D U L], [H]elp, [Q]uit, [S]tart search? [S]
```

This prompt lets you locate files using four criteria for searching: File Name, File Keyword, File Description and Uploader. Files must match ALL criteria in order to be listed in the subsequent display of matching files.

The [**N**]ame search criteria lets you locate files with a file mask using the standard DOS wildcards * and ?. Selecting this choice allows you to change the standard file mask *.* (all files). You can edit the field to search only for files with the ZIP extension (*.ZIP) or only those beginning with the word WILD (WILD*.*). Use of the [N]ame criterion performs a fast search since filenames are indexed.

The [**K**]eyword search criteria lets you locate files based on the 6 keywords associated with each file. The keywords for each file were entered either by the person responsible for uploading the file to the system, or were generated by *WILDCAT!* based on the description entered. Selecting this choice allows you to type in a single word associated with the file(s) you want to find. The "key" to a successful keyword search is brevity. If you are looking for programs for

Microsoft Windows version 3.0, don't enter the entire phrase, shorten it to WIN. The reason is that key searches will produce a match for every key word that matches or is LONGER. For example, if the list of all keywords for all files is :

```
VICTOR
VITAMIN
WAN
WAR
WIN
WINDOW
WINDOWS
WONDER
```

then the word WIN will select and match WIN WINDOW and WINDOWS while the word WINDOWS will only match the single entry. Keep your keywords short, and try several related ideas for the best search. Keyword searches are very fast since they are also indexed.

The [**D**]escription search criteria lets you locate files by searching the entire description of the file, including the extended message description. Utilizing this search method adds significant time to the search process, *unless* it is coupled with a keyword or filename mask. If used, it should be limited to a specific file area, or combined with a limited filename mask or keywords.

The [**U**]ploaded by search criteria provides a method of locating all files uploaded by a specific individual, and may be combined with other items.

None of the above search criteria are case sensitive. The more characters entered, the narrower the search criteria and the less likely you are to get a match.

After entering your search criteria for Name, Keyword, Description or Uploaded by, you may also select the type of listing you want. Before beginning the search use the [**L**]isting method command to select Single line listing, Double line listing or Full listing.

Once you have set all items as desired, start the search by entering [**S**]tart search at the command prompt. Searches may be aborted by pressing the spacebar.

Matching files are displayed just as they are in the file listing command, with the ability to Mark and Download files as desired.

[U] Upload a file(s)

Uploading allows a caller to send files from his system to the BBS.

Multiple files may be sent at once, but only using the internal protocols that support batch uploads. These include Ymodem (all variations), Zmodem and Kermit.

When an upload is requested, *WILDCAT!* begins by asking for the file transfer protocol to be used, but only if the user has no default set in the user record. Note that two internal protocols Ymodem-G and 1K Xmodem-G rely on modem hardware error-correction, and will only be listed as options if the BBS and the caller both have error-correcting modems, and have negotiated an error-correcting connection.

After protocol selection the caller is then asked to enter the filename for each file being sent. The caller is asked if the file should be password protected, and the default is N. If password protection is selected, the caller can enter a password which will be required in order to download or view the file. A password also prevents the file from being listed with the [L]ist files command, except to the sysop who will see it with a "P" flag indicating it is protected.

The caller is then asked for a description of the file, and is allowed to enter a single line of 60 characters. Immediately following the description the caller may enter a detailed description of the file in message format, up to fifteen lines long. The detailed description is entered in the standard message editor, but becomes a part of the file database record, not part of any message or conference. Extended descriptions remain with the file and are deleted with the file when it is purged. They may be viewed using the [I]nformation on a file command at the file menu or at any file listing prompt. They are also displayed in the full-screen file display mode, if present. If keyword entry is not set to autogenerate from the description, the caller is also asked to enter 6 unique Keywords to be used for file search criteria. These keywords allow very fast searches, and are either entered by the caller or generated by *WILDCAT!* from the description text. Finally just before the upload is begun, the caller is asked if automatic log off is desired after completing the upload. The entire series of prompts after selecting a protocol is:

```
Enter name for file: [WILDCAT1.EXE]

Do you wish to password protect this file? [N]
Description? [WILDCAT! TEST DRIVE, PART 1 OF 2                    ]

Would you like to leave a detailed description of this file? [N]

Automatically log-off after upload is completed? [N]
```

If a caller fails to enter the information or hangs up before answering the questions, or sends files which are different from the names input before the upload started, the files are accepted as non-protected uploads but the description field is completed automatically with a note indicating the user name responsible for the upload such as

```
<<Ask Caller Name>>,
```

where Caller Name is the name of the person who uploaded the files.

From that point forward it is up to the caller's communication program to properly begin the transfer and carry it to successful completion of the upload. A pop-up window is displayed on the local monitor indicating the progress of the upload, unless an external protocol has been selected. The screen display for external protocols varies depending on the protocol used. See the *Features in Depth* section for more details of external protocols.

An in-depth explanation of the various protocols available in *WILDCAT!* is contained in the on-line help file PROTO.HLP discussed on the following page. Again, the caller is responsible for properly initiating the sending of the file on the other end. Uploads using external file transfer protocols are allowed, but are limited to one file at a time.

When *WILDCAT!* is run locally without a modem connection the upload function remains operable. Instead of requesting the file transfer protocol to be used it requests the full path name of the files to be added to the file database. The "upload" proceeds by copying the files from the source path to the correct BBS path and then adds the filenames and prompts for descriptions. DOS wildcards may be used to add groups of files to the database in this manner.

[V] View a compressed file

This selection is designed to allow viewing of a compressed file saved in one of a number of formats such as .ARC, .PAK, .ZIP, or .ZOO. It causes *WILDCAT!* to shell to a second copy of the command processor and to execute VIEWCOMP.BAT. The filename selected by the caller is passed to the batch file using the %1 parameter. This batch file MUST be created by the sysop for proper operation. See *Features in Depth* for a more detailed explanation of this feature.

[X] DOS hook 1

Executes the batch file FILE1.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named FILE1.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name FILE1.BAT for execution.

Operation is the same as DOS Hook 1 choice on the Main Menu and it requires a similar "if exist" test, should it be implemented without the swap option enabled.

For both DOS Hook 1 and 2, the key used for execution should normally be changed to reflect a letter representative of the actual menu choice implemented. You are cautioned to avoid duplication of menu letter assignments already in use when making the change.

[Z] DOS hook 2

Executes the batch file FILE2.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named FILE2.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name FILE2.BAT for execution.

Operation is the same as DOS Hook 1 and it requires a similar "if exist" test, should it be implemented without the swap option enabled.

[?] Command help

Refer to the [?] option discussion under MAIN menu.

Sysop Menu

[1] Message menu

Calls the message menu.

[2] File menu

Calls the File menu.

[A] Activity log listing

Displays the contents of ACTIVITY.### files in last-in, first-out order. Screen pauses are implemented. In a multi-node system, a sub-prompt asks which log file is to be viewed.

[D] Drop to DOS

This choice is used to drop to DOS when calling in from remote ONLY. Use [ALT] [D] to shell to DOS in a local login.

If the SYSOP has specified that Drop to DOS is allowed, the remote caller is given access to the operating system through the communication port. See Remote Drop to DOS in the section *Features in Depth* for additional information. *Unless there is a very good reason for it, this option should be confined to the system operator or disabled.*

[E] Event management

This choice is used to create, list, delete, disable or otherwise manipulate the event processor activities. Refer to the section *Features in Depth* for complete information on the *WILDCAT!* event processor.

[F] File database area

This selection is used to access and manipulate the file database within *WILDCAT!*. It is the command center for the listing of all files available for download on the system. Since this menu item contains extensive options, it is covered in detail in *Features in Depth*.

[H] Help level

Refer to the [H] option discussion under MAIN menu.

[G] Goodbye & logoff

Refer to the [G] option discussion under MAIN menu.

[J] Join conference

[K] Kill the activity log

This is the proper method of erasing the ACTIVITY.### file when it becomes an unmanageable size. By responding Y to the confirmation sub-prompt, the activity log will be erased and a new copy of ACTIVITY.### started. In a multi-node system the sysop has a choice of which log files to erase.

[N] Node management

This option allows full maintenance of all nodes from local login or remote. When first invoked it displays a screen of information reflecting the status of the node in use. The display can be changed to show the node status of any node on the system, and changes can be made to take effect immediately:

Printer—a yes/no flag that toggles whether the printer is active on this node, the same function as the F3 key on the local console.

Page—a yes/no flag that toggles whether the page function is active on this node, the same function as the F4 key on the local console.

Bell—a yes/no flag that toggles whether the page bell is active on this node, the same function as the F5 key on the local console.

Keyboard—a yes/no flag that toggles whether the keyboard is active on this node, the same function as the F2 key on the local console.

Local next—a yes/no toggle that toggles whether the node will prompt for a local login after the current call is completed, the equivalent of pressing ALT L while a caller is logged in.

Screen write—a yes/no flag that toggles whether screen writing is active on this node, the equivalent of pressing ALT W.

Dos next—a yes/no flag that toggles whether the node should go to DOS next after the current call is completed, the equivalent of F10 or ALT X keys.

Kill caller—a yes/no flag that toggles whether the active call should be immediately terminated, the equivalent of ALT - on the local console.

Sysop next—a yes/no flag that toggles whether a local logon by the sysop should be next, the same function as the F1 key on the local console.

300/1200/2400 baud—a yes/no flag that toggles whether specific baud rates are allowed at this time. This is used to reverse the effect of events that make these changes.

Remaining time—reflects the amount of time left for the caller on the node. This can be changed to increase or decrease time available just like using the F7 or F8 keys on the local console.

Security—reflects the security profile of the current caller. This item can be changed and operates like the F9 key on the local console.

The remaining items display information about the current and previous caller to the node.

[P] Purge deleted mail

Results in the sub-prompt:

```
Purge deleted messages in [C]urrent or [A]ll conferences or
[ENTER] to quit? [ ]
```

This option is necessary since, when a given message is killed by a user, it is not *really* deleted. Instead, the message is flagged as deleted in the database and can only be read by users having a security profile that allows reading deleted or personal mail. The deleted flag remains set until option [P] is performed on the Sysop Menu, either manually or automatically in an event. After messages are purged, the space occupied by that message may be used for the equivalent amount of space in another message.

Note that performing a wastebasket dump does not reduce the size of your message database file. The space occupied by purged messages does become available for new messages, but file compression is not performed. The *wcREPAIR* program may be used if you find the message database file has an inordinate number of unused purged message records as the result of a mass deletion. The number of unused message records can be viewed using [S]tatistics and checking the number of Deleted Records on the second display screen. Documentation for *wcREPAIR* is contained in the section *WILDCAT! Support Programs*.

[Q] Quit to main menu

Exits the sysop menu and returns to MAIN menu.

[S] Status of databases

This is an information option for the sysop which presents a two-page display of system status and information. Portions of the statistics relate to all nodes on a multiline system while others can only reflect the status of the current node.

This first screen indicates background information such as BBS name, system operator name, start date, node number and current date and time. In addition, five columns cover Database Overview, Quick Statistics, Sysop Toggles, Baud Rate Access and Available Disk Space.

The **Overall System Information** lists the total number of Users, Files, Conferences and Messages for the BBS.

The **Quick Stats** section recaps the number of calls, messages, uploads and downloads since the Quick stats were last reset, either from the console or via an event.

The **Local Sysop Toggles** reflect the current state of the keyboard, printer, page allowed and page bell for the node in use. Note that these statistics reflect only the current node.

```
------------------------[ Overall System Information ]-------------------------

Bulletin board name: WILDCAT! BBS                                Date:  01/26/93
    System operator: John Doe                                    Time:  10:53am
 Date of first call: 12-20-90                                    Node:  28

Overall System     Quick Stats Since      Local Sysop        Baud Rate Access
Information        01/20/93 4:48pm        Toggles            For this Node
---------------    --------------------   ----------------   -----------------
Users: 3           Calls Received: 20     Local Kybd: ON     2400 Baud: YES
Files: 1,706       Messages left : 64     Printer   : OFF    1200 Baud: YES
Confs: 10          Files Dnloaded: 0      Sysop Page: OFF     300 Baud: YES
Msgs : 64          Files Uploaded: 0      Page Bell : OFF

Available Disk Space
---------------------
C:  99,762,176 F: 320,159,744 G: 207,335,424 H:  95,428,608 I:  27,389,952
J:  15,699,968 S: 320,159,744 T: 320,159,744 U:  95,428,608 V:  95,428,608
W: 207,335,424 X: 207,335,424 Y:  27,389,952 Z:  27,389,952

Press [ENTER] to continue?

 GWEN BARNES, Mustang Software, In (Local)                        Kybd
 Phone: 805-395-0223    Age: 38 Node: 28  Sec: SYSOP       Since: 01-93 Time: 976
```

The **Baud Rate Access** displays whether there are any baud rate restrictions in effect for the node. Again, note that these statistics reflect only the current node.

The last section shows the **Available Disk Space** for all hard disks. Drives not in use by the BBS are displayed along with the BBS system drives.

The second screen contains **Database Status Information**. It is useful to determine if your Message, File and User databases are properly indexed.

All databases are in a constant state of change with records being added and deleted. Each time a record is added, the size of the database expands as does the size of the key or index files. This expansion continues until a record is deleted. Deleted records continue to take space in the database, but are flagged as deleted to allow a new record to be written over top of the deleted one. If a number of records are deleted at one time, the size of the database remains the same but will not have to increase in size again until the same amount of new data has been added. For this reason, the number of *total records* may be more than the number of *active records* at any point in time.

```
-----------------------[ Database Status Information ]-----------------------
Current Conference: Qmodem Support

Database      Active Records      Total Records      Deleted Records
--------      --------------      -------------      ---------------
FILES                 1,706              1,706                   0
USERS                     3                  3                   0
MESSAGES                 48                 48                   0

--------------------------[ Key Status Information ]--------------------------

Key Name        Number     Key Name          Number     Key Name          Number
-----------     ------     ------------      ------     -------------     ------
FileNameKey =    1,706     UserNameKey   =        3     MsgNumberKey   =      15
FileAreaKey =    1,706     UserSecKey    =        3     MsgOrigNumKey  =      15
FileDateKey =    1,706     UserExpKey    =        3     MsgDestKey     =      15
FilePWKey   =    1,706     UserAliasKey  =        0     MsgSubjectKey  =      15
FileUpKey   =    1,706                                  NotReceiveKey  =      15
FileKeywrds =    9,841                                  DeleteMsgKey   =       0
WILDCAT! Version: 3.9 (PROFESSIONAL).  Registration Number: 86-0001.

Press [ENTER] to continue?

 GWEN BARNES, Mustang Software, In (Local)                    Kybd
 Phone: 805-395-0223    Age: 38 Node: 28  Sec: SYSOP      Since: 01-93 Time: 974
```

This is normal and indicates there is room for new records without expanding the size of the database files. The number of *active records* plus the number of *deleted records* should equal the number of *total records* if your database is not corrupted.

The *key status information* section displays key names and numbers. Keys are indexed references within the databases which allow very fast access to record information.

The first column, **File Keys**, tracks files by Name, file Area, file Date, file Password, the person who Uploaded the file, and the 6 Keywords associated with each file. If the database keys are correct, the first 4 of these will display the

same number. The Uploader key may be different if some files have a blank as the person who uploaded the file, and the number of Keywords reflects the actual number of keywords in the database.

The second column, **User Keys**, tracks the users by Name, Security profile, Expiration date and Alias. If the database keys are correct, the first 3 of these will display the same number. The Alias key will only reflect the number of users who have entered an Alias name in their user record.

The third column, **Message Keys**, tracks the *current conference* messages by Number (the displayed number), Original number (derived from date/time entered), the Destination key (for tracking to whom the message is address), the Thread key (for threaded replies), the Received key (to track personal received mail), and the Delete key (to track "deleted" but not purged messages). If the database keys are correct, the first 4 of these will display the same number. The Received key will only reflect the number of personal messages unread by the recipients. The Delete key will only reflect the number of messages that have been deleted, but not purged using the Wastebasket function on the Sysop menu or by an event.

A quick look at the key status screen can tell you if one or more of the indexes have been corrupted. The *wcREPAIR* program is designed to repair such situations and full operational information is in the section *WILDCAT! Support Programs*.

[U] User database area

This choice is used to access the user database within *WILDCAT!*. Since this menu item contains extensive options, it is covered in detail in *Features in Depth*.

[X] DOS Hook 1

Executes the batch file SYSOP1.BAT which performs any desired activity. The batch file commands are defined by the sysop in a file named SYSOP1.RUN. When the DOS Hook is executed, *WILDCAT!* copies this file to the correct name SYSOP1.BAT for execution.

Operation is the same as the DOS Hook 1 choice on the Main Menu, and it requires a similar "if exist" test should it be implemented without the swap option enabled.

For both DOS Hook 1 and 2, the key used for execution should normally be changed to reflect a letter representative of the actual menu choice implemented. You are cautioned to avoid duplication of menu letter assignments already in use when making the change.

[Z] DOS Hook 2

Executes the batch file SYSOP2.BAT which can perform any desired activity. The batch file commands must be created as desired by the sysop in a file named SYSOP2.RUN. When the DOS Hook is executed, *WILDCAT!* will copy this file to the correct name SYSOP2.BAT for execution.

Operation is the same as DOS Hook 1, and it requires a similar "if exist" test should it be implemented without the swap option enabled.

[?] Help with Commands

Refer to the command help discussion under MAIN menu.

Chapter 7
Features in Depth

"Real joy comes not from ease or riches or from praise of men, but from doing something worthwhile."

Sir Wilfred Grenfell

In this Chapter...

- Message editors
  - The line editor, a BBS tradition
  - The full-screen or visual editor, the new wave
- Events
  - Internal and external processes to maintain your system
- Remote drop to DOS
  - How to set up access to DOS from remote
  - What can and what cannot be run from remote
- Doors
  - Games, and more...
- External file transfer protocols
  - Add any file transfer protocol to your system
- Viewing compressed files
  - How to look inside .ARC, .LZH, .PAK, .ZIP, or other files

This chapter reviews *WILDCAT!*'s more complex features in a comprehensive manner, taking time to explain the details of each.

Command Line Options

WILDCAT! can be started with command line options, as follows:

/B—This is the Baud rate switch used to start *WILDCAT!* when another program, such as a front-end mailer, has already answered the phone. The /B should be followed by a space and then the DCE connection rate of the caller. Valid rates are 300 - 57600. If the connection is making use of a hardware error control protocol the baud rate should be immediately followed by **MNP**. An example is:

```
WILDCAT /B 2400MNP
```

The /B switch can also accept the word LOCAL in place of the baud rate for a local logon. Whenever *WILDCAT!* is started using the /B switch it exits to DOS after the call. This exit takes place automatically and does not require POSTCALL.BAT for operation.

Another valid option for the /B switch is the word **NOVELL**. Netware users at local workstations can take advantage of automatic login based on the Netware login name used at the workstation. If their full name entered in their Novell user information matches their *WILDCAT!* login name, the lookup is performed automatically by *WILDCAT!* and the user is immediately logged into *WILDCAT!*

/A—This is the Answer switch. It is used in any configuration where *WILDCAT!* needs to be told to send the ATA answer command to the modem. It is designed for situations where a device other than the modem has responded to the ring and wants to pass the call to the BBS *without a carrier established*. An example might be FAX/Answering system that answers each call and determines whether it is a FAX, voice or BBS call. When it determines the call is not FAX or voice it passes the open line to the modem and tells *WILDCAT!* to send ATA and establish carrier via the /A command. The call completes normally and the BBS exits to DOS after the call.

System Events

The event processor is used to have *WILDCAT!* perform certain tasks at predefined times during the day or evening. These tasks may range from doing system maintenance such as purging deleted messages (the wastebasket dump) to running an external utility to perform some system maintenance task. *WILDCAT!* supports up to 65,535 events for each node, in addition to a Call Processing Event at the end of each call, if desired.

All events are created from the system operator's menu, except for the Call Processing Event which is scheduled by creating the proper batch file and making it available. The Call Processing Event shares most of the operational features of other external events and is discussed in detail later in this section.

All other events are scheduled from the sysop menu using the [**E**]vent maintenance menu choice. There are 12 event types available to control or perform the following functions.

300 Baud Access

Each node can turn on 300 baud access or turn it off as often as desired. This event offers the flexibility to prohibit low speed calls during peak hours if desired, and to determine when the restriction is in effect each day. Unless turned off in an event, 300 baud access is allowed at all times.

Note that once 300 baud access is turned off, it remains disabled until an event is scheduled turning it back on. Failure to schedule an event to restore 300 baud access results in permanent suppression of 300 baud calls. During periods of limited access, a 300 baud caller is advised that 300 baud calls are not being accepted and the caller is asked to try later. This hard coded message may be replaced by the display file NO300.BBS (SCR) which might contain a schedule of 300 baud access times.

1200 Baud Access

Like 300 baud access, each node can prohibit or allow 1200 baud access during predefined periods. The same operational requirements are in effect, but the display file name presented to 1200 baud callers during periods of 1200 baud prohibition is NO1200.BBS (SCR).

2400 Baud Access

Like 300 baud access, each node can prohibit or allow 2400 baud access during predefined periods. The same operational requirements are in effect, but the display file name presented to 2400 baud callers during periods of 1200 baud prohibition is NO2400.BBS (SCR).

Sysop Page Hour

This event controls sysop paging hours. Like the baud rate limitations, the ability to page the sysop can be turned on and off at different periods throughout the day, and on different days of the week. These two flags control only the current node.

System Wide Page

This controls paging the sysop on all nodes. It will turn on or off all page flags for all nodes. Individual node page flags (above) turned on or off after the time for this event, results in a change only for that node.

Reset Quick Statistics

The quick statistics are displayed on the Idle Screen and show the number of calls, messages, downloads and uploads since the quick stats were last reset. They can be reset to 0 from the Idle Screen or through this event.

Set DOS Next Flag

The DOS Next flag causes the node to exit *WILDCAT!* just as if the u key was pressed. This event might be used to terminate the program and allow the system to be used for other activities.

Dump Deleted Mail

This event purges all deleted messages from all conferences. It is the same as the sysop menu choice to [P]urge deleted mail. It affects all conferences and cannot be limited to single conferences as you can do with the sysop menu choice.

Run a Batch File

This is one of the most powerful event operations. It lets you run any batch file to perform any desired function at any time of the day or night. Batch files for this option may be located in any directory since the full path is entered as part of the configuration. The batch file is then copied to the node work directory when it is run.

Event Creation and Operation

When the sysop menu choice [E]vent Management is selected, the following prompt is displayed:

```
# Act Description  SMTWTFS Type Start   Last Executed          Batch Name

1 Yes  No 300 baud       X Hard 9:00am  Tue 01/26/93 1:09pm
2 Yes  300 baud Ok X       Hard 5:00pm  Tue 01/26/93 1:09pm

Current time: Tue 01/26/93 1:10pm

Edit [A]dd, [E]dit, [R]un, [D]elete, [S]chedule, [H]elp, [Q]uit? [Q]
```

The numbered events above the prompt line are only displayed after at least one event has been created. They are displayed in alternating colors for easier reading. In this example, we have event number 1 that prohibits 300 baud calls beginning at 9a.m. Saturday morning, and event number 2 that again allows 300 baud calls beginning at 5p.m. Sunday night. If additional events are created, they are automatically numbered and added to the list. The order of the event numbers in the list has no effect on operation.

The header information in the above display indicates the event number (#), whether the event is active or disabled (Act), the description of the event, the weekdays it is active (Sunday through Saturday; an X indicates an active day), the event type (Flex, Soft or Hard), the start time, the date and time it was last executed, and the batch file name if the event is a batch process.

Events can be forced to run immediately using the [R]un command or [D]eleted to remove them from the event list completely. The [S]chedule command changes the "Last Executed" field to "Next Scheduled Time", and shows when each event will run next.

[A]dding a new event first asks which type of event you want to add. The first 11 options are referred to as **internal** events while option 12, Run a Batch File, is an **external** event. Internal events run from within *WILDCAT!* and do not require sysop intervention or setup for operation.

After selecting the event type from the list, the weekly schedule is displayed. This schedule is used to specify which days of the week the event is to be active. Days are numbered from [1] Sunday to [7] Saturday, and are selected by number or [E] for everyday:

```
Execute event on:

    [1] - Sunday
    [2] - Monday
  * [3] - Tuesday
    [4] - Wednesday
  * [5] - Thursday
    [6] - Friday
  * [7] - Saturday

[1..7], [E]very Day, [C]lear all, [A]bort, [S]ave & continue? [S]
```

The asterisk (*) next to a day of the week indicates the event will execute on that day. In the example above the event will execute on Tuesday, Thursday and Saturday. The selection marker is a toggle which can be changed by entering the number of the day, or a range of days such as 2 - 6 to toggle Monday through Friday. All days can be cleared (no asterisks) with the [C]lear all key, and all days can be marked with the [E]very day key. [A]bort can be used to abort the creation of an event.

When the days for event operation have been established, the [S]ave & continue selection must be used to continue with event creation. The next prompt determines the execution method used.

```
Execution method:

[F]lexible - Execute during non-busy flex hours.
[S]oft     - Execute after call nearest to schedule time.
[H]ard     - Execute at schedule time, force caller off.

[A]bort

Event type? [F]
```

[F]lexible or flex events are those that must execute *sometime* during the day they are scheduled. Two settings in MAKEWILD help control flex events; 1) Inactivity before flexible events and 2) Time to begin forcing flexible events. These two items from MAKEWILD *General Information - Part 2* control execution since flex events are always executed during idle time when the system is not taking calls. A flex event will look for an opportunity to execute on the day specified starting at one second after midnight, and will succeed as soon as the amount of idle time is equal to or greater than the *Inactivity before flexible events*. The default is 5 minutes of inactivity. If the minimum amount of inactivity has not occurred by the *Time to begin forcing flexible events*, the flex event will execute regardless of inactivity, immediately following the next call. In effect, the flex event becomes a Soft event. The default time to begin forcing flexible events in MAKEWILD is 18:00 or 6 p.m. Flexible events do not have a specific time of day associated with

them. Flex events are useful for system management items that can take place at any time of day. These might include a wastebasket dump or a batch file that performs a function that is not time sensitive.

[**S**]oft events are events that need to execute at or near a specified time, but can wait until a caller is finished before executing. Soft events execute at the time specified if no one is online, but if a caller connects, even a minute before the scheduled time, the event will be postponed until the call is completed. The event will then execute immediately after the call. Many events can be classified as soft events and it is the default response.

[**H**]ard events are those that absolutely must execute at the time specified. A hard event will reduce a caller's online time before the event, and actually forces the caller off if he fails to say goodbye after a 5 minute and 2 minute warning. No calls are taken within 5 minutes before a hard event, and time in doors and external protocols can be monitored and limited using the TSR (terminate and stay resident) utility TIMEOUT.EXE. See the *External Protocols* section of *Features in Depth* for complete information on TIMEOUT.EXE. Once the execution type has been established, the time to start is entered in 24 hour format. As indicated previously, flex events have no starting time, and only hard events are sure to execute at the exact time entered.

Finally, if the event type is Run a Batch File, the method of batch file execution is requested. Batch files can be run as a [S]hell process, invoking a second copy of the command processor, or by [T]erminating *WILDCAT!* and testing for the existence of the correct batch file in the CAT.BAT startup batch file.

[**S**]hell—The shell process can be invoked with no sysop intervention or configuration except for creation of the batch file to be run. This batch file name can be anything desired, but must exist in the correct location assigned in the event. It should contain all commands necessary to execute the desired process, and should simply stop at the end. It should *not* recall CAT.BAT or WILDCAT.EXE since the shell process automatically restarts *WILDCAT!* when the batch process ends. *WILDCAT!* will shell to DOS and directly execute the batch process requested, with immediate return to *WILDCAT!* after completion. The shell will retain all of the *WILDCAT!* code in memory unless swapping is turned on in MAKEWILD, in which case all but a 3.5K kernel in memory will be swapped to EMS or disk. The ideal method is to enable swapping and to use the shell option.

[**T**]erminate—The terminate option removes *WILDCAT!* from memory and copies the batch file name requested to the standard filename EVENT.BAT for execution. This copy process is done in the WCWORK\NODE# directory, and the EVENT.BAT file is executed from that location. However, since *WILDCAT!* terminates after creating the EVENT.BAT file, it is the responsibility of the sysop to include commands in the CAT.BAT file to trigger execution of the file when it is created. The appropriate test is:

```
IF EXIST C:\WC30\WCWORK\NODE1\EVENT.BAT C:\WC30\WCWORK\NODE1\EVENT.BAT
```

A proper CAT.BAT file for an event might look like this:

```
ECHO OFF              prevents display to screen
:RESTART              label for restarting if needed
CD \WC30              changes to the proper directory
WILDCAT               starts the program
IF EXIST C:\WC30\...\EVENT.BAT C:\WC30\...\EVENT.BAT
                      checks to see if the batch file was
                      created in the node work directory
                      and is present to run; if so, runs it
IF ERRORLEVEL 1 GOTO RESTART
                      checks for error on exit and
                      restarts this file at label :RESTART
                      if the errorlevel was 1
ECHO ON               only gets here if F10 is executed.
```

Since the file EVENT.BAT will be run if it exists in the node work directory, it must also be responsible for the restart of *WILDCAT!*, which has been terminated. For this reason, the original batch file that was created for the event (whatever the name) might look like this:

```
ECHO OFF              prevents display to the screen
CD \MYPROG            changes to the proper directory
MYPROG.EXE            starts the program
CD \WC30              changes back to the WILDCAT dir.
CAT.BAT               restarts WILDCAT! since it was
                      terminated rather than swapped.
```

Notice that the last line restarts *WILDCAT!* using the CAT.BAT file, a necessity when the [T]erminate option is used. *As mentioned earlier, the easier method of event operation is to make use of the [S]hell choice, thus avoiding the necessity of batch testing in CAT.BAT.* The sample copy of CAT.BAT distributed with the program does *not* contain all the "if exists" check statements needed, and must be modified if the terminate option is used.

Call Processing Event

The final topic under the category of events is the special event which may be run after each *WILDCAT!* call, the Call Processing Event. If the file POSTCALL.RUN exists in a NODE WORK directory it is run after every call, using either a DOS shell or termination of *WILDCAT!* as specified in MAKEWILD.

The .RUN file must be located in the Work directory for the node, and the .BAT file is created and executed there as well. You will recall that each node has its own work directory located in the WCWORK subdirectory created by the *WILDCAT!* program.

This event is run in a shell or by program termination, again depending on how MAKEWILD is set to operate for DOS Hooks. This feature is included to allow sysops with special application needs to create their own programs to perform some action between calls. It is *not* needed for net and echomail processing.

The Call Processing Event operates exactly like other batch file events, and requires the same type test in CAT.BAT unless a swap is used. The only difference in this case is testing is done for POSTCALL.BAT rather than EVENT.BAT. See the previous section on running batch file events for details.

Remote Drop To DOS

The ability to access the Disk Operating System from a remote connection is one of the most exciting aspects of telecommunications. This function operates in a manner very similar to DOS Hooks and Event batch files, and will be run as a shell process or by terminating *WILDCAT!*, depending on your MAKEWILD setting for "Terminate for Doors & DOS Hooks" in *General Information - Part 3*. If you elected to terminate (not recommended), it requires a properly designed CAT.BAT file to operate properly.

The batch file for the drop to DOS function may be located in either of two areas, the *WILDCAT!* home directory or the work directory for each node. There are advantages and disadvantages to each.

WILDCAT! Home Directory—If the drop to DOS batch file is located here (C:\WC30), there only needs to be one batch file for the entire system. When the drop is executed, the DROPDOS.BAT file is copied to the node work directory and execution continues. The disadvantage to this type of setup is a single batch file may not be able to be written to handle various communication ports or other configuration parameters in a multiline system. It is the most convenient method of operation however.

Node Work Directory—In this configuration a batch file for drop to DOS is custom written for each node and placed in the node work directory, i.e., C:\WC30\WCWORK\NODE2. This allows drop to DOS to have a different batch process for each node. The disadvantage is the duplication of batch files and other configuration settings. If used, these batch files should be named DROPDOS.RUN.

WILDCAT! also creates the files DOOR.SYS and USERINFO.DAT in the node work directory when drop to DOS is requested. Both files contain information about the caller who invoked the drop, but DOOR.SYS is specifically designed to be read by door programs. USERINFO.DAT contains additional caller information and can also be read if desired.

The way *WILDCAT!* determines how you have set up your personal system is straight forward. When a door is requested *WILDCAT!* first looks for the appropriately named DROPDOS.RUN file in the work directory for the node requesting the drop. If it is found, it is copied to the name DROPDOS.BAT and execution continues. If it is not found, *WILDCAT!* looks in the home directory for DROPDOS.BAT, and copies it to the work directory. In either case *WILDCAT!* then changes to the work directory and takes steps to actually run the batch file. Running the DROPDOS.BAT file is done in one of two ways, depending on whether you have set MAKEWILD to terminate for Doors and DOS Hooks.

Drop to DOS processing

The actual behind-the-scenes processing by *WILDCAT!* from this point is important for a complete understanding of drop to DOS operation. After *WILDCAT!* has copied DROPDOS.BAT in the node work directory, it begins steps to run the batch file. The first step is to determine how the door is going to be run, by checking the MAKEWILD setting for Doors & DOS Hooks.

If it is set to **shell** to DOS (rather than terminate), a second copy of COMMAND.COM is loaded and the DROPDOS.BAT filename is passed as a parameter to the new command processor for execution. The new command processor runs the batch file and exits back to the original copy when the last command is completed. This return from a shell is automatic and requires no calls to WILDCAT.EXE or CAT.BAT in the batch file.

If you have followed the recommended setting of using a shell for all Doors and DOS hooks (setting the terminate for Doors & DOS Hooks question to N), you will have a much easier time executing remote drop to DOS. If you want to **terminate** for Doors & DOS Hooks, *WILDCAT!* will terminate after creating the DROPDOS.BAT file in the node work directory. It is then up to the CAT.BAT file to test for the existence of DROPDOS.BAT in the node work directory and to run it if found.

The proper syntax for this batch file test is:

```
IF EXIST C:\WC30\WCWORK\NODE1\DROPDOS.BAT C:\WC30\WCWORK\NODE1\DROPDOS.BAT
```

A proper CAT.BAT file for drop to DOS might look like this:

```
ECHO OFF                    prevents display to screen
:RESTART                    label for restarting if needed
CD \WC30                    changes to the proper directory
WILDCAT                     starts the program

IF EXIST C:\. . .\DROPDOS.BAT C:\. . .\DROPDOS.BAT
                            checks to see if the batch file was
                            created in the node work directory
                            and runs it if present.
IF ERRORLEVEL 1 GOTO RESTART
                            checks for error on exit and
                            restarts this file at label :RESTART
                            if the errorlevel was 1
ECHO ON                     only gets here if F10 is executed.
```

The file DROPDOS.BAT will be run if it exists in the node work directory, and will handle the chores necessary to properly allow DOS access.

Operation of DOS from remote *requires* a program that can perform redirection of input and output. By default, DOS looks at the keyboard for its input, and sends its output to the screen. When calling from remote, this needs to be changed to accept input from the appropriate communications port, and to send output there as well. DROPDOS.BAT could make use of the internal DOS command CTTY to perform this redirection of input and output, but it is not the ideal choice. In reality, many IBM compatible computers are unable to perform redirection using this command, and we *strongly* suggest it not be used. It is preferable to use a redirection program written by a 3rd party to handle this process. One such program is DOORWAY, which is a shareware product available on many BBS systems, including the registered user's HQ BBS at Mustang Software.

Trouble shooting problems with the CTTY command are beyond the scope of this discussion. If problems are encountered, we suggest using DOORWAY.

DOORWAY with drop to DOS

DOORWAY is a program by Marshall Dudley which allows almost any program to be run as a door, and bestows the ability to remotely control a computer over a modem. It can redirect all programs except those which use bit-mapped graphics.

DOORWAY functions in much the same way as CTTY, but offers smoother installation and operation on a wide range of hardware and DOS releases. Full documentation is available in the program files distributed by the author, which are available on the *WILDCAT!* HQ BBS.

An example DROPDOS.RUN file (to be copied to DROPDOS.BAT by *WILDCAT!*) for use with DOORWAY might look like:

```
ECHO OFF                    prevents display to the screen
DOORWAY COM1 /C:DOS
                            loads the doorway program with a
                            command line switch for running DOS.
                            the batch file stays here during the
                            entire DOS session.
REM
REM - THE NEXT TWO LINES ARE ONLY NEEDED IF YOU ARE
REM - NOT USING THE SHELL OPTION BUT ARE TERMINATING
REM - REMOVE THEM IF YOU ARE USING SHELL!
REM
CD \WC30                    changes back to the WILDCAT dir.
CAT.BAT                     restarts WILDCAT! since it was
                            terminated rather than shelled.
```

In the above example, DOORWAY runs, with a command line switch to load a second copy of COMMAND.COM. While in the second DOS shell, DOORWAY continues to monitor carrier and time connected (if desired), while performing the redirection needed. The computer is told that all future input (key presses) and output (screen displays) should be rerouted to the COM1 port. This results in the remote sysop or caller receiving the DOS prompt C:\WC30 (or whatever).

As you can see, while involved in a remote DOS session with Doorway you are actually in another shell in the middle of your DROPDOS.BAT file. The way to properly return to *WILDCAT!* is to type the command EXIT while in the DOORWAY shell, which closes the shell and returns to DOORWAY.

```
C:\> EXIT
```

Doorway then exits and resets all redirection back to the original parameters and allows the batch file to reload *WILDCAT!* via the CAT.BAT file. Note that the last two lines that reload *WILDCAT!* are *not* used and *should not be present if your system is using shells* rather than terminating for Doors & DOS Hooks.

Since this is the first example of a user (or the sysop) returning to a previous *WILDCAT!* session, we will undertake a short discussion of the "inside" operation that allows this re-connection.

Re-connection

If a **shell** is used for the remote process, *WILDCAT!* simply reloads itself from memory, using the image in EMS or disk if swapping was also enabled. This reload after a shelled process requires no action on the part of the system operator or other batch files. The user is automatically returned to the same point where he left the program. This is yet another advantage of using shell rather than terminate.

If *WILDCAT!* is **terminated** for Doors or DOS Hooks, a more complex process is involved, since *WILDCAT!* has been completely removed from memory. As the user returns, *WILDCAT!* will start up normally and load itself into memory, and should find carrier detected, since the caller is still connected. Whenever carrier is detected on startup, *WILDCAT!* checks to see if USERINFO.DAT also exists. If it is found, carrier will be maintained and the name in USERINFO.DAT will be logged back into the system. If USERINFO.DAT does *not* exist, then *WILDCAT!* attempts to lower carrier before setting up the system. During the return a user is asked to verify his identity with his password *only* if *WILDCAT!* is answering the phone using modem auto-answer. If ring detect is being used (auto-answer is disabled), there will be no prompt for password since there is no possibility that the caller is other than the person listed in USERINFO.DAT.

Using Remote Drop to DOS

Due to the method in which the characters are transmitted over the COM port, many usual DOS and program functions are unavailable while connected to DOS from remote if CTTY is used. Mustang Software, Inc. cannot assist in the trouble shooting of system problems related to operation of the CTTY command used in remote DOS operation. We will be happy to review a batch file process or other DOS implementation on the *WILDCAT!* HQ BBS system.

Using DOORWAY can extend the system's abilities while operating from remote and is strongly recommended. Follow the instructions with the program for best results, and don't forget to register your copy with the author.

Doors

A Door is a feature which allows *WILDCAT!* to run specific programs from outside the program code. A door program can be written specifically to operate in a door environment, or it may be a standard program that is run under the redirection capabilities of DOORWAY. Again, CTTY is not recommended for door operation.

When Mustang Software originally researched the state of door handling in a BBS system, we discovered that there was no standardized method of setting up for this external program operation. The Capitol PC User Group's program RBBS-PC handles this feature using a specific, defined format which is unique to RBBS-PC. There are many programs written which take advantage of the RBBS-PC format. Other BBS programs use other methods of passing parameters to the door programs. In fact, many use a number of different, incompatible methods depending on the version of the BBS that is in use. In an effort to standardize the door environment, Mustang Software has contacted authors of several BBS systems and a number of door authors. We have reviewed the needs of this type of program and have adopted what we hope will be molded into a standard record for passing parameters for the door feature. The file format adopted is one used by several other BBS systems called DOOR.SYS. This file is created and deleted by the system and usually will not be seen on your disk. The DOOR.SYS file is created for use by the door, but is not reread on return from the door. An additional file USERINFO.DAT, is also created in the WCWORK\NODE# directory and is reread after return to *WILDCAT!* to pickup modifications to the user record made by external programs.

Although a large number of *WILDCAT!* - specific doors have been developed, Mustang Software, Inc. does not write any door programs. We have made provisions to allow *WILDCAT!* to run many of the doors available for other BBS systems. The only door distributed with *WILDCAT!* is DOORTEST which is a simple test program that will verify your batch file and configuration settings.

We will review the setup of DOORTEST to familiarize you with standard door operation. All DOORTEST does is echo back the name of your BBS System and allow the remote caller to type a test message on the screen. If it operates properly, your procedural parameters and hardware are working correctly and other programs can be installed. We refrain from distribution of other door programs since most are products of other shareware authors who may have distribution restrictions. Many of the more popular choices are available on the Mustang Software *WILDCAT! HQ* private BBS, as well as other *WILDCAT!* BBS systems.

Door Implementation

Doors are entered by a caller by selecting the Main Menu command [**D**]oors. This presents the display file DOORS.BBS (or DOORS.SCR) which should be created to contain the choices available, much like the Bulletin menu BULLETIN.BBS. In order for this feature to function, ***WILDCAT!* must find DOORS.BBS in your path for display files for the conference** designated in MAKEWILD.

The caller then selects a number choice corresponding to the program they wish to run. This number is the key to which batch file is invoked by *WILDCAT!* since a batch file named DOOR#.BAT will be executed.

Batch files for the doors available may be located in either of two areas, the *WILDCAT!* home directory or the work directory for each node. There are advantages and disadvantages for each.

WILDCAT! Home Directory—If door batch files are located here there only needs to be one batch file for each door. When the door is executed the DOOR#.BAT file is copied to the node work directory as DOOR.BAT and execution continues. The disadvantage to this type of setup is that a single batch file may not be able to be written to handle various communication ports or door configuration parameters in a multiline system. It is the most convenient method of operation, however.

Node Work Directory—In this configuration a batch file for each door is custom written for each node and placed in the work directory, i.e., C:\WC30\WCWORK\NODE2. This allows a door to have a different batch process for each node. The disadvantage is the duplication of batch files and other configuration settings. If used, these batch files should be named with the door number and the extension .RUN. An example batch file name for door number 1 would be DOOR1.RUN. *WILDCAT!* will rename the file to DOOR.BAT at the time of execution.

The way *WILDCAT!* determines how you have set up your personal system is straightforward. When a door is requested it first looks for the appropriately named DOOR#.RUN file in the work directory for the node requesting the door. If it is found, it is copied to the name DOOR.BAT and execution continues. If it is not found, *WILDCAT!* looks in the home directory for DOOR#.BAT, and copies it to the work directory as DOOR.BAT. In either case *WILDCAT!* then changes to the work directory and takes steps to actually run the batch file. Running the DOOR.BAT file is done in one of two ways, depending on whether you have set MAKEWILD to terminate for Doors and DOS Hooks.

Door Processing

The actual behind-the-scenes processing by *WILDCAT!* from this point is important for a complete understanding of door operation. After *WILDCAT!* has copied DOOR.BAT in the node work directory, it begins steps to run the batch file. The first step is to determine how you have indicated the door should be run, by checking the MAKEWILD setting for Doors & DOS Hooks.

If it is set to **shell** to DOS (rather than terminate), a second copy of COMMAND.COM is loaded and the DOOR.BAT filename is passed as a parameter to the new command processor for execution. The new command processor runs the batch file and exits back to the original copy when the last command is completed. This return from a shell is automatic and requires no calls to WILDCAT or CAT.BAT in the batch file.

If you have followed the recommended setting of using a shell for all Doors and DOS hooks (setting the terminate for Doors & DOS Hooks question to N), you will have a much easier time executing doors. If you have indicate you want to **terminate** for Doors & DOS Hooks, *WILDCAT!* will terminate after creating the DOOR.BAT file in the node work directory. It is then up to the CAT.BAT file to test for the existence of DOOR.BAT in the node work directory, and to run it if found.

The proper syntax for this batch file test is:

```
IF EXIST C:\WC30\WCWORK\NODE1\DOOR.BAT C:\WC30\WCWORK\NODE1\DOOR.BAT
```

A proper CAT.BAT file for DOOR operation might look like this:

```
ECHO OFF                    prevents display to screen
:RESTART                    label for restarting if needed
CD \WILDCAT                 changes to the proper directory
WILDCAT                     starts the program
IF EXIST C:\WC30\...\NODE1\DOOR.BAT C:\...\DOOR.BAT
                            checks to see if the batch file was
                            created in the node work
                            directory and is present to run; if so,
                            runs it
IF ERRORLEVEL 1 GOTO RESTART
                            checks for error on exit and restarts this
                            file at label :RESTART if the errorlevel
                            was 1
ECHO ON                     only gets here if F10 is executed.
```

The file DOOR.BAT will be run if it exists in the node work directory, and will run the selected door program. In this case where a shell is not used, the last line of the DOOR.BAT must restart *WILDCAT!* by restarting CAT.BAT. The sample copy of CAT.BAT distributed with the program does *not* contain all the "if exists" check statements needed, and must be modified if the terminate option is used.

Note that *any* program run from a termination of *WILDCAT!*, whether it is a door, remote drop to DOS, a menu DOS Hook, or an external file transfer protocol, must recall *WILDCAT!* via CAT.BAT at the end of the batch file. Conversely, *any* program that executes as a shell should simply have the batch file end without recalling *WILDCAT!* since the end of the batch process signals an end to the shell and invokes automatic return to *WILDCAT!* right at the point where it started.

Successful door operation rests with the batch file called to run the door. As indicated previously, DOOR.BAT is simply a copy of DOOR#.BAT for the correct # door that has been requested. For each available door the sysop must have created a batch file to run the program, including any conversion routines required. These batch files must be placed in the node work directories for each node on the system.

For example, if door #1 is DOORTEST, then the batch file that is copied to DOOR.BAT for execution is DOOR1.BAT (or DOOR1.RUN if stored in the node work directory), and it must contain every command needed to run the door from the instructions given by the door author. Let's take a look at DOORTEST now.

DOORTEST

Like many other doors you may encounter, DOORTEST needs a configuration file for proper operation. It does not require any conversion programs since it was written specifically for *WILDCAT!*, and knows how to read the DOOR.SYS file as well as USERINFO.DAT. Later in this section we will review conversion procedures for doors that cannot read either DOOR.SYS or our own USERINFO.DAT.

The configuration file required is named DOORTEST.CFG, and is a plain ASCII text file of 2 lines. Line one must contain the complete name of your door information file (DOOR.SYS), including the entire path. Remember that DOOR.SYS is created in your node work directory, so this line might read

```
C:\WC30\WCWORK\NODE1\DOOR.SYS
```

The second line in the configuration file should be the name of your BBS system. An example DOORTEST.CFG file would be:

```
C:\WC30\WCWORK\NODE1\DOOR.SYS        the path to DOOR.SYS
The WILDCAT! HQ BBS                  the BBS name
```

Once we have created the configuration file we can continue setting up the batch file to invoke our test door. We assume that the test will be door number 1 in the door menu file (DOORS.BBS, located in the display path), and will call our file DOOR1.BAT. The command line for starting the DOORTEST program is simply the program name DOORTEST followed by the name of the configuration file DOORTEST.CFG. Our batch file looks like this:

```
DOORTEST  DOORTEST.CFG        This is the actual program. The
                              command line argument DOORTEST.CFG
                              is a text file containing informa-
                              tion needed by DOORTEST to operate
                              properly.
CAT                           This line is ONLY needed if shell is
                              NOT used. It calls your startup
                              batch file after the door is done.
                              CAT.BAT then gets WILDCAT! started
                              properly.
```

When the above batch file is executed the door program runs and then the CAT.BAT file is called to restart *WILDCAT!*.

This test of doors can be run using [ALT] [L] or [F1] to logon locally but it *only* performs full remote testing when a dial-in test is performed.

Every door program operates in a similar manner, and each must call CAT.BAT at the end to restart the BBS *unless* MAKEWILD is configured to use shell instead of terminate for doors & DOS Hooks.

This simple example makes the assumption that the door program DOORTEST.EXE is located in the current directory (the node work directory). In reality door programs are usually installed in their own subdirectory somewhere on disk, and the batch file would need to change to that directory prior to starting the program.

Return From a Door

If a shell is used, the door automatically returns to *WILDCAT!* at the point where it left the door menu. If terminate is used and *WILDCAT!* is restarted from scratch, a few tests must be performed.

During the return from a door a user is asked to verify his identity with his password *only* if the program is answering the phone using modem auto-answer. If Ring Detect or Ring Result is being used (auto-answer is disabled), there will be no prompt for password since there is no possibility that the caller is other than the person listed in USERINFO.DAT.

If carrier is *not* detected but USERINFO.DAT exists, it is erased after first charging the user for his time in the door, since he obviously was disconnected or hung up inside the door program. If Carrier Detect is found *without* USERINFO.DAT, *WILDCAT!* attempts to lower it and complete initialization normally.

As mentioned earlier, there are many doors written for other BBS program environments. In order to operate some of these door programs, the sysop needs a conversion utility which creates the required system files for the other BBS program from our DOOR.SYS. The *WILDCAT!* HQ BBS contains up-to-date conversions for all other BBS door programs. The proper use of these utilities is included in a documentation file with the conversion program. It usually consists of an additional line in the door batch file consisting of the conversion program name, such as WC2RBBS, which creates a configuration file for RBBS-PC from the DOOR.SYS file.

Cautions, Concerns and Caveats!

The above explanation of doors is simplified and assumes that no problems are encountered. In actual operation a number of events may occur that interrupt either the remote user's connection or the batch file operation. Both of these circumstances could cause problems ranging from a locked-up system to a serious security breach if not handled properly. This section deals with methods to protect your system and its users from such problems.

Carrier Detect Monitoring

The first possible problem to overcome is that of a caller who drops carrier during a door. This could cause the door program to sit idle indefinitely! Unless the door is watching the carrier detect status, a locked system could result. All reputable door programs monitor CD as part of their operation, and automatically terminate when carrier is lost, returning control to the batch file which will then either recall *WILDCAT!* via CAT.BAT or release the shell and return. This is the best protection available.

In the event that a door does not handle this chore, you should think twice about running it! Although there are several utility programs which will monitor carrier and *reboot* if CD is lost, we recommend against their use since a system reboot is a harsh action and could cause file close problems.

Ctrl-Break and Ctrl-C Lockout

Another obstacle to be overcome to successfully run doors involves securing your batch files from interruption, either intentionally or otherwise. Most users are familiar with the use of CTRL BREAK or CTRL C to prompt for termination of a batch

process. Allowing a remote caller to do this during execution of a door could be a catastrophe! Remember that every door makes use of a batch file, one that must be protected from unauthorized exit.

WILDCAT! includes internal code to automatically disable the use of CTRL C and CTRL BREAK when it is started. These keystrokes are not enabled again until *WILDCAT!* is terminated with the F10 key. This means that you are automatically protected from breaking out of a batch file *unless* the program you run as a door re-enables the keystrokes. Use of CTTY disables this protection.

Although there are other programs that offer this protection, such as BRK.DRV, we have found that incompatibilities exist when they are run in conjunction with the internal *WILDCAT!* disabling code. Use of BRK.DRV is discouraged.

User Verification on Return to WILDCAT!

Yet another item of concern when operating doors has to do with the possibility of a person other than the original caller getting on the system at the close of a door.

The problem arises if the sysop has set MAKEWILD to have the modem use auto answer rather than ring detect or ring result. In that case the original caller could have been disconnected during the door for some reason, and anyone could have called in *after* the disconnect but *before WILDCAT!* recycled. Even if the door was invoked with a shell there is a period of time before recycle. The modem could answer the phone and then establish carrier for the new caller. Now we have a situation where *WILDCAT!* comes to life, finds a carrier present and then looks for USERINFO.DAT. *WILDCAT!* then assumes that the original caller whose name is in USERINFO.DAT is returning, but we know better.

To prevent security problems in this regard, *WILDCAT!* will *always* ask for the user's password if MAKEWILD is set to answer the phone by auto-answer. If ring detect or ring result is being used rather than auto-answer, no password is requested on return from a door since no other caller could have established a connection.

To avoid any possible security problems, Mustang Software strongly recommends that sysops who implement doors only do so if they are answering phone by ring detect. Forcing *WILDCAT!* to answer the phone by ring detect assures that the modem will not acknowledge any new callers since it won't even try to answer the phone on its own.

Door Technical Support

One final note about doors. Due to the differences in setup and configuration of this feature for each door, we must limit our technical support calls to problems with the *WILDCAT!* interface only. This means that the we are unable to extend advice on

specific door operation or hardware system configurations. We will assist in configuration of the DOORTEST program but after proper operation of DOORTEST, the responsibility for installation and operation of specific programs rests with the user. We make *no* commitments that any door program will run properly on your system. Each door operates differently and may require a conversion program, special device driver, BASIC run time module (BRUN40, etc.), or other type of manipulation to operate.

Some versions of DOS, in combination with some IBM compatible hardware, do not function properly with the CTTY command or with some doors. This is a DOS/ hardware problem and not a flaw in the *WILDCAT!* program.

Questions on specific doors should be directed to the program author. We encourage program authors to contact Mustang Software for program configuration advice and possible testing of their product within our beta group.

We suggest that sysops making use of this feature call the *WILDCAT!* HQ BBS and interact with other sysops in the special message conference and file areas devoted exclusively to doors.

External Protocols

This option is designed to allow implementation of file transfer error-checking protocols written by outside sources. Note that an external protocol is allowed as a choice for a user's default protocol. Nevertheless, users wishing to take advantage of external protocols may prefer to set their default to allow selection of a protocol at the time a download is initiated, to take advantage of any new protocols which may be offered.

Not all external file transfer protocols are capable of sending multiple files in a batch mode. Each protocol is defined as either batch or non-batch during its definition in MAKEWILD, and the caller is prompted for one or more filenames accordingly.

Operational Overview

When a user selects an external protocol, perhaps [M] for MPT (formerly Puma), the user is prompted for the name of the first file to be sent. If the protocol doesn't support batch transfers, this is the only filename requested. If it does support batch transfers, additional names are requested, up to a maximum of 99. For a single file download, *WILDCAT!* checks the filename for validity and then *copies* the file from its regular directory to a special path reserved for external protocols for each node. This path is automatically created in the node work directory as C:\WC30\WCWORK\NODE#\EP. The actual file transfer then takes place from that area.

In the case of multiple files and batch downloads, as each filename is entered, its full path is added to a *list* created in the EP directory. All requests are checked against the user's usual download limitations, and the disk space available in the transfer area. As each additional filename is requested it is added to the list. The list conforms to the syntax for Omen Technology's DSZ protocols, as well as many others. If a protocol is unable to perform batch downloads using a file list, only the first filename entered is sent. This is in contrast to internal non-batch protocols where multiple files are sent by re-invoking the protocol multiple times.

After the last file is requested the transfer begins and it is the responsibility of the appropriate batch file to perform the transfer properly. After the transfer is complete, *WILDCAT!* determines whether the transfer was successful by looking for a file named TRANSFER.BAD created by the batch process explained in the following section.

Batch File Creation

WILDCAT! allows up to 10 different external protocols to be established. For each the sysop must have first obtained a copy of the appropriate file transfer program such as DSZ.EXE or MPT.EXE and any additional files necessary for operation. The next step is to establish the batch files for passing parameters to the transfer program as needed. The actual contents of these batch files will depend on the specific protocols, but usually includes the program name with several command line arguments. Before we can review the batch parameters, we need to review the procedures *WILDCAT!* performs to pass control to the external batch file.

When an external protocol is selected, *WILDCAT!* first deletes the contents of the EP directory for the node performing the transfer.

WILDCAT! then changes to the EP directory where a DOS shell is invoked. The full filename and path of the download batch file (C:\WC30\xxx.BAT) is passed to the shell from the EP directory. This process *leaves WILDCAT! resident* in memory, unless the sysop has specified that a swap to disk or EMS should be made. If a swap to disk or EMS is not performed, it is important to make sure that you have enough available memory after the shell to invoke your transfer program. *WILDCAT!* displays the memory available on screen immediately after starting the shell procedure.

Upon exit to the newly created DOS shell *WILDCAT!* passes 5 parameters to the DOS environment in the form of variable batch parameters. These parameters are available to a batch file through the use of the % batch command, and consist of the DTE baud rate, communications port number, time remaining, DCE baud rate and the filename(s) to send or receive. These 5 pieces of information are needed by most transfer programs. They are assigned to DOS batch commands %1 through %5 respectively.

The DTE baud rate is passed as %1, and is a number 300, 1200, 2400, 9600, 19200, 38400, or 57600, and represents the locked rate if the port is locked. The communication port is passed as %2, and is an integer 1, 2, 3, 4, etc. The time remaining for the call is passed as %3 and can be used to make certain the caller does not stay connected longer than allowed. The actual connect rate is passed as %4 and is the DCE rate. The final parameter, %5, consists of either the filename for a single transfer, or the name of the list of files for batch mode. If batch transfers are supported the %5 parameter becomes @FILES.LST, the filename created by *WILDCAT!* containing the list of files to be sent.

Refer to your DOS manual for details on use of the % command if needed.

Download Example

The batch files controlling both downloads and uploads *must* be located in the *WILDCAT!* home directory and are the same for every node. Replaceable parameters assign different ports if needed.

WILDCAT! will change to a temporary subdirectory under the node directory, and executes the external protocol batch file from this subdirectory. For example, if your batch file is DSZDOWN.BAT in the \WC30 directory, *WILDCAT!* sends the command line \WC30\DSZDOWN.BAT from its current directory \WC30\WCWORK\NODEX\EP

When the external protocol has finished, this temporary subdirectory is removed.

A typical batch file for MobyTurbo Zmodem download might look something like this:

```
TIMEOUT  -M%3                    Loads the TSR program TIMEOUT.EXE
                                 to watch time remaining and log
                                 caller off when up.
COPY C:\WC30\ALL.OK TRANSFER.BAD
                                 if DSZ.LOG is supported, copy this
                                 to the current directory
DSZ  port %2  ha both  sz  %5  -m
                                 starts the DSZ program and tells it
                                 which port and the filenames to use.
                                 The ha both is a DSZ command to
                                 handshake on both ends. The speed is
                                 auto set.
TIMEOUT  - U                     Unloads TIMEOUT.EXE TSR - a must!
```

The translation of the above goes something like this. The first line loads the program TIMEOUT.EXE which is a TSR that simply disconnects the caller after a specified time. The time is passed as %3 by *WILDCAT!*. You may omit this feature if you do not care if calls extend beyond the allotted time, perhaps causing a missed hard event. For full details of the TIMEOUT program see *Chapter 9, Support Programs.*

The second line in the batch file is used to help *WILDCAT!* determine if the file transfer was successful or not. If the protocol can create a log file named DSZ.LOG in the node work directory (\WC30\WCWORK\NODEx), *WILDCAT!* checks it for status information. If that file does not exist at the end of the transfer, *WILDCAT!* checks for the existence of TRANSFER.BAD in the EP directory. If it exists, *WILDCAT!* posts the transfer as unsuccessful to the ACTIVITY.xxx file, and the user is not charged with the download. *WILDCAT!* then deletes TRANSFER.BAD.

In order for the success or failure of the download to be known without a DSZ.LOG file, the file TRANSFER.BAD must be found in the EP directory. If DSZ.LOG is *not* found in the node directory, *and* the file TRANSFER.BAD *is* found in the temporary EP subdirectory, *WILDCAT!* assumes the transfer was not successful.

In the third line, the DSZ.COM or DSZ.EXE program is given the command line arguments as follows. Note that DSZ requires the words "port" and "ha both" and "sz" to be in lower case letters. It will not operate properly if capital letters are used.

The word **port** is required by DSZ and is followed by the number of the communication port. You may either follow it with the parameter %2 which *WILDCAT!* has sent to your port, or you may save a space and enter the actual number such as 1. If all nodes use the same communications port number you may want to use the number 1 or 2, but using %2 will ensure proper translation even if you have multiple nodes or change communications ports.

The **ha both** is a DSZ command to have the two protocols handshake with one another prior to transfer.

The characters **sz** are short for send using Zmodem, and are followed by the filename to send which is %5. The %5 is replaced by the name of the list of files when batch transfers are used, or by the single filename for non-batch protocols. The **-m** indicates to use the MobyTurbo option of DSZ.

Each external protocol will have different command line arguments and may use the parameters in another order, with or without the words "port" & "speed." There is no substitute for reading the protocol documentation.

The final line of the batch file unloads the TSR program TIMEOUT from memory. This is *very important* since loading a TSR in a shell and failing to unload it before exiting will cause extreme memory corruption upon return.

At the end of an external protocol transfer, program control will automatically return to *WILDCAT!*. There is no need to call CAT.BAT or EXIT, and the path is automatically reset to the *WILDCAT!* startup directory, eliminating the need for a directory change in your batch file.

Upload Example

Uploads using external protocols are handled in a similar manner. When an upload using an external protocol is requested, the caller is asked for the name of the file to upload. The caller is then prompted for the file area to receive the file(s) regardless of whether the transfer is batch or not. A caller may choose from any file area to which he has upload rights as specified by his security profile in MAKEWILD.

The previous batch parameters of %1 through %5 are used for the same purposes, but %5 is only assigned for single file uploads, since that is the only time we know the filename.

Now let's look at a sample upload batch file and review its contents.

```
TIMEOUT  - M%3                    Loads the TSR program TIMEOUT.EXE to
                                  watch time remaining and log caller
                                  off
DSZ  port %2  handshake both  restrict  rz  -m
                                  runs the DSZ program with command
                                  line arguments s required.
TIMEOUT  -U                       Unloads TIMEOUT.EXE TSR - a must!
```

Again, the translation goes something like this. The first line loads the program TIMEOUT.EXE which is a TSR that simply disconnects the caller after a specified time. The time is passed as %3 by *WILDCAT!*. You may omit this feature if you do not care if calls extend beyond the allotted time, perhaps causing a missed hard event. For full details of the TIMEOUT program see *Chapter 9, Support Programs.*

We then start DSZ followed by the command line parameters **port %2 handshake both restrict**. The additional parameter restrict tells DSZ that we want to restrict files being received to the current directory, and not allow full pathnames to place files in other areas. The **rz** indicates we want to receive using Zmodem, and the **-m** indicates to use the MobyTurbo option of DSZ. The filenames to be received %5 only needs to be added to the command line for non-batch, and should be placed wherever the protocol documentation indicates. Our example DSZ upload does not require it, since DSZ will get the filenames from the sending system. The DCE connect rate %4 and the DTE connect rate %1 are not needed with DSZ.

After the file(s) have been received and the transfer is completed, *WILDCAT!* makes a list of the files it received by looking in the EP directory. For each file found, it then compares it to the list of files already in the database to prevent duplicates or uploads of restricted filenames. If a duplicate is found, the caller is prompted to rename or discard or overwrite the original, if he has overwrite access. Descriptions are then requested for each file and it is moved out of the EP area to the proper directory. Upload compensation and credit for the upload is only given if the file is

kept by *WILDCAT!*. If a caller disconnects after sending a file, but before entering the description, the file is retained and the description includes the uploader's name by saying "Ask ‹Caller Name›, who dropped carrier".

Bi-directional Protocols

Some external file transfer protocols are capable of sending and receiving files simultaneously, and can offer considerable improvements in throughput. Two good examples would be Bimodem from Erik Labs, and HS/Link from Samuel Smith.

To install a bi-directional protocol in *WILDCAT!,* follow the general instructions for installing external protocols in MAKEWILD. You should also consult the documentation for your protocol driver for instructions for batch file creation.

An example upload batch file (HSUP.BAT) is given below, using HS/Link as our protocol driver:

```
ECHO > TRANSFER.BAD
HSLINK -P %2
```

The TRANSFER.BAD file is created before the upload begins, so that *WILDCAT!* can determine by the existence of this file if the transfer was canceled before any files were sent. It is deleted automatically by *WILDCAT!* when DSZ.LOG is examined.

Here is an example of HSDOWN.BAT:

```
HSLINK -P %2 %5
```

WILDCAT! uses the DSZ.LOG file to determine which files have been uploaded and downloaded during a bi-directional session. The following line should be added to your CAT.BAT file, to indicate the location of this log file.

```
SET DSZLOG=C:\WC30\WCWORK\NODEx\DSZ.LOG
```

To simplify batch file commands, HS/Link is able to store its default settings, for example port speed, in a configuration file. Information on how to create this configuration file is contained in the documentation for HS/Link.

As is the case with doors, external protocols are not routinely distributed with *WILDCAT!* Many are available on the private Mustang Software *WILDCAT! HQ* BBS.

Viewing Compressed Files

The [V] selection on the files menu supports a feature which allows looking into files which have been compressed and combined using utility programs to create files ending in .ARC or .ZIP, etc. This is accomplished by having *WILDCAT!* run an appropriate un-compressing program and sending the output to a file for display to the caller.

It operates in much the same manner as external protocols in that a shell to another copy of the command processor is initiated and a USERINFO.DAT file is created in the node work directory with information on the current caller. Use of this feature must only be considered after completely reading the preceding sections regarding batch file security and the associated warnings.

When [V] is selected *WILDCAT!* suspends operation, shells to another copy of DOS and initiates a batch file named VIEWCOMP.BAT. This batch file MUST be located in the *WILDCAT!* home directory, the one where CAT.BAT operates and where the MAKEWILD configuration is stored. *WILDCAT!* copies this file to the node work directory and then changes to that directory prior to execution. The shell is performed and the batch variable %1 is passed to the batch file for its use. This variable contains the complete drive, path and filename of the .ZIP (or whatever) file to be processed as selected by the caller. If you are unfamiliar with the %1 parameter in batch files refer to your DOS manual.

VIEWCOMP.BAT should look like this:

```
VZ %1 VIEWCOMP.DAT
```

This example makes use of the VZ program supplied with *WILDCAT!* BBS, and is simple to use. The batch file is executed by *WILDCAT!* from the node work directory, and the file VIEWCOMP.DAT is copied to that area as well. This prevents problems if the option is used by multiple nodes at the same time.

Immediately after executing the above single line batch file, program operation is automatically returned to *WILDCAT!*. As soon as the program regains control, *WILDCAT!* displays the contents of VIEWCOMP.DAT to the caller using screen pauses as necessary.

Any program may be used to accomplish the "peek" into the compressed file, as long as it is capable of handling the compression method used on your system. Several shareware programs are available which can un-compress multiple formats, including .ARC, .PAK, .ZIP, and .ZOO.

Message Editor Operation

WILDCAT! contains two distinctly different editors, the Line Editor and the Full-Screen Editor. Any caller can make full use of the Line Editor, but the Full-Screen Editor requires ANSI terminal emulation capability in the caller's communications program proper operation. Either can be selected as a user's default to be used each time a message is entered, or the choice may be made prior to each message. Note that the Full-Screen Editor may be invoked and set as a user default even if ANSI is not enabled for the caller. In this situation, the caller will find that it operates improperly and should switch to the Line Editor.

Line Editor

The line editor allows entering text on a single line at a time, and only allows back-spacing on that line to make corrections. The backspace is destructive in nature, and all deleted text must be re-entered. Once the ENTER key is pressed to end a line or word-wrap moves the cursor to the next line, the previously entered line(s) cannot be re-edited by the same method.

After a line is completed, it can be edited using the [E]dit command only. The message line editor is probably one of the most misunderstood functions in message entry. To begin, there must be a way to tell the editor what text is bad, and what text to use instead. After asking for the line number to be edited, *WILDCAT!* needs to know what needs to be changed. The syntax used to implement this procedure is OLDSTRING;NEWSTRING (note the semicolon between the two words), where OLDSTRING represents the text to be replaced, and NEWSTRING represents the new text. This command is translated as "Take the first occurrence of the characters OLDSTRING and delete them, then insert the characters NEWSTRING in the same location. For example, if the message line reads:

```
this is a message to shw how to use th Edit command.
```

Obviously we need to change two errors, the word "th" for "the" and "shw" for "show". First let's fix "shw" by using the command

```
shw;show
```

which scans for the word "shw" and replaces it with "show". Now the harder correction. Notice that the first occurrence of the incorrect text "th" is actually a part of correct text "this" in the first word. Therefore we can't simply use the command

```
th;the
```

or the new message will read "theis is a message..." The proper method is to broaden the OLDSTRING search to include additional unique text such as

```
use th;use the
```

Notice that we can replace any number of letters even with a shorter or longer NEWSTRING.

After an edit the caller is presented with the corrected line and allowed to make more corrections, if needed. Pressing [ENTER] on a blank line terminates the Edit mode. Note that editing an existing message (one that has previously been saved) will result in a change to the message date and time to properly reflect the revised contents.

Full Screen Editor

This editor allows callers to move the cursor freely about the editing page using cursor keys and [HOME], [END], [PG UP] and [PG DN] keys, very much like many word processors. In order to do so it makes use of ANSI codes to tell the caller's cursor where it should move on the screen. Since most communications programs have provisions to make use of ANSI terminal mode, almost any caller can use this feature if desired.

Some of the Full Screen Editor functions are not available as standard ANSI codes and require additional emulation modes to operate properly. These functions include options such as [PG UP], [HOME], and several other keys which are not defined in the standard ANSI mode. If a caller's communication program supports DOORWAY mode it can make use of these extended functions. Both *Qmodem* and Telix have a DOORWAY mode (a terminal emulation mode) which can be invoked with [ALT] [=] (holding ALT while pressing the equal sign). This toggle is necessary since most communications programs use the editing keys such as [PG DN] for other functions like starting a download. Unless DOORWAY mode is invoked, only the cursor keys, [DEL], [←] (backspace) and the [CTRL] keys will be active. Extended DOORWAY mode, which distinguishes between the gray keys and numeric keypads, is supported in the Full Screen Editor.

The Full Screen Editor makes use of the following keys in standard ANSI mode and Doorway mode (^ indicates Ctrl keys):

ANSI-BBS	DOORWAY	OPERATION
^A	Ctrl-Left Arrow	Cursor word left
^B		Format paragraph
^C	PgDn	Page down
^D	Right Arrow	Cursor right
^E	Up Arrow	Cursor up
^F	Ctrl-Right Arrow	Cursor word right
^G	Del	Delete character at cursor
^H	Backspace	Backspace (destructive)

ANSI-BBS	DOORWAY	OPERATION
^I	Tab	Tab
^J		Join lines
^K/^End		Delete to end of line
^L		Re-draw screen
^M	Enter	New line
^N		Split line
^P	End	Cursor end of line
^Q^Y		Delete to end of line
^R	PageUp	Page up
^S	Left Arrow	Cursor left
^T		Delete word right
^U		Escape
^V	Insert	Toggle insert mode
^W	Home	Cursor to start of line
^X	Down Arrow	Cursor down
^Y		Delete line
^Z		Display help

Note that the full screen editor display on the local host system will show the last few line numbers wrapped on a single line above the user record screen, if displayed. This is a normal occurrence and does not affect the remote display.

Because ANSI escape sequences are used to control cursor movement within the editor, uploading of ANSI files into messages is not supported. If an attempt is made to send an ANSI-encoded file the ESC character is stripped, leaving meaningless [##m or similar codes.

Message Commands

After entering text in the editor, the message editing prompt appears at the end of the text:

This prompt is the same for both the full screen editor and the line editor and even allows switching from one editor to the other after message entry.

[A]bort—Signals a desire to discontinue message entry and lose all text entered. A warning follows:

```
"Are you sure you want to abort?"
```

Responding with Y returns the caller to the message menu, or to reading messages if the aborted message was a reply.

[C]ontinue—Returns to the message editor at the next available line. This choice returns to the LINE EDITOR only; use [F] to return to the full-screen editor.

[I]nsert—This item is needed only by the LINE EDITOR and allows insertion of new lines of text between existing ones. The user is prompted for the line number where new lines should be inserted. The selected line number moves down, and a new line is added at the chosen number. Any number of new lines will be inserted as word-wrap creates more new lines as needed. In the full screen editor pressing e creates a new line as does ^M.

[L]ist—This command redisplays all message lines using appropriate pauses.

[E]dit—This item is needed only by the LINE EDITOR since the full screen editor can edit lines using the cursor keys. The line editor correction system is covered in its entirety in the previous section *Line Editor*.

Ca[r]bon—At this prompt a caller may enter as many names of additional recipients as desired. Note that selecting carbon copy saves the message *as is* and sends copies to the recipient and any carbons desired. It should not be used until message editing is completed.

[U]pload—This option allows you to upload prepared text into the editor, using a regular transfer protocol. If no default protocol has been selected, the user will be prompted to select a protocol for the transfer. The user is then prompted to begin the upload. For local logins, the user will be prompted for the path and file name of the uploaded text.

[Q]uote—This option only appears when replying to another message. It allows placing all or part of the original message in the reply for clarity. When quote is selected the entire text of the original message is displayed, and the user is prompted for a beginning and ending line to quote from the messages. The quoted lines are added to the bottom of the message in progress.

Each user can also quote during a reply as an automatic part of the reply process. Auto-quoting can be turned on in any individual user record using the Main Menu command [Y]our settings. When auto-quoting is activated the entire original message is quoted in the reply when it is begun. Coupled with the power of the full screen editor, auto-quoting offers an easy way to make a clear reply.

[F]ull screen—This is the proper key to use to reenter the full screen editor rather than [C]ontinue. It continues editing at the end of the last line of the message.

[D]elete—This item is needed only by the LINE EDITOR since the full screen editor can delete lines while editing using Ctrl Y. It prompts for the first line to delete and then for the last line. Prior to performing the deletion the text of the lines to be deleted is displayed for confirmation. Deleted lines are removed and higher-numbered lines move up.

[S]ave—After the message has been proofread and edited, the Save command will update the message base with the message and appropriate carbon copies, if requested.

[H]elp—Presents the caller with the contents of the display file EDITMSG.HLP or EDITMSGC.HLP, which contains information similar to the instructions here.

At[t]ach—Allows attaching a file to the message. Its use may be limited on a conference basis in MAKEWILD if desired. When selected, the caller is prompted whether he wants to attach a file to the message since this choice is often not fully understood. If the reply is Y the caller is asked whether a file is to be attached:

The name of the file attached may be anything the caller desires but must not include any path information. After entering the filename, the user is prompted for the file transfer protocol to be used for the upload. Any available protocol may be selected and the file transfer will begin just as it does when uploading a file. At completion of the upload, the caller is returned to the message entry prompt and may add additional text before saving the message, if desired. File attachments via local logins are supported also — *WILDCAT!* will prompt for a DOS path and file name rather than a transfer protocol.

A message with a file attached contains an additional line at the end which is generated by *WILDCAT!* as the message is displayed to the caller. It reads:

When a message with a file attachment is read, the read prompt contains an additional choice to [**D**]ownload the file. If download is selected the caller is prompted to select a protocol in the same manner as the file menu choice. After completion of the download the caller is returned to message reading at the point the download was begun.

The actual file attached to a message is located in the directory specified for file attachments in MAKEWILD, and is saved with a random unique name generated by DOS at the time it was received. The DOS-generated unique names consist of random alpha characters while Novell network generated names begin with the $ character followed by a series of numbers and letters such as $T900012. The reason for generated filenames is to ensure no attachments overwrite any others and to allow erasing a message and its attached file, even if another message has the same actual filename attached.

Note that a file attached to seven messages to seven different users will result in seven copies of the file (under different generated names) in the attach directory. As each user reads, downloads and deletes his personal message the attached file is also deleted. If a message is generated to ALL, only one attached file is generated for the one message. Each user that reads the message to ALL will be offered the download option, and the same file will be sent to each "reader." When the message to ALL is deleted the single attached file will also be removed.

User Database Maintenance

```
Record number  : 4                                          Match : NONE

[ 1] Name      : DELBERT WALRATH                  [17] Sec level : FULLUSER
[ 2] From      : BSCI BBS                         [18] Exp date  : /  /
[ 3] Help level: Novice                           [19] User since: 01/26/93
[ 4] Password  : THAT'S PRIVATE          Age: 38  [20] D.O.B.    : 01/30/54
[ 5] Phone [V] : 805-555-1212                     [21] Memo date : /  /
[ 6] Phone [D] : 805-555-1234                     [22] # Calls   : 1242
[ 7] Last call : 01/26/93 2:33pm                  [23] Page avail: YES
[ 8] Comment 1 :                                  [24] Display   : AUTO
[ 9] Comment 2 :                                  [25] E-prompt  : YES
[10] Company   : Blueprint Service Co. Inc.       [26] Hot keys  : NO
[11] Address 1 : 730 17th St.                     [27] File disp : Double line
[12] Address 2 :                                  [28] Editor    : No default
[13] City      : Bakersfield                      [29] Protocol  : No default
[14] State     : CA                               [30] N-mail bal: $     .00
[15] Zip       : 93301                            [31] Acct bal  : $     .00
[16] Country   : USA

Edit [1..31], [N]ext, [S]earch, [M]atch, [F]ind, [A]dd,  [E]xtra Info
[C]onference, [P]rev, [D]elete, [W]rite, [H]elp, [J]ump, [Q]uit?
```

The user database contains complete information about callers to the BBS. Most access to the user database is made from the sysop menu choice [U]ser Database, but there are several others available.

A user with sysop privileges can also access this information while reading a message. After reading every message the command line includes the option [S]ysop, which allows access to the user record of the sender or receiver of the message with a single keystroke. In fact, once in the user database the sysop has full access to any user record. After viewing and making modifications as desired, the sysop is returned to the message where the user record function was started.

Another way to access the user database is while listing files from the file database section of the sysop menu. The [U]ser command offered after each file is displayed will display the user database record of the person who uploaded the file. This is handy in the event the sysop needs to check the security or other status of the user, or perhaps send a message using the [W]rite command from the user database. After viewing the user record the sysop is returned to the file database at the same file.

Regardless of how the user database is reached, the display is the same. Records are shown in alphabetical order by last name. Since an entire user record is larger than one display screen, the balance of each record is available via the [E]xtra info. command if needed:

```
DELBERT WALRATH from BSCI BBS

[ 1] Computer type  : 80486                    [15] Lines/page      : 23
[ 2] Alias          : DEL *.*                  [16] Msgs written    : 1661
[ 3] Title          :                          [17] Uploads         : 160
[ 4] Sex            : Not disclosed            [18] Dnloads         : 1809
[ 5] Help level     : Regular                  [19] Time left       : 30
[ 6] New files      : 01/23/93 12:00am         [20] Daily DL        : 2
[ 7] Total upld Kb  : 31191                    [21] Daily DK        : 15
[ 8] Total dnld Kb  : 195239                   [22] Last conference: 23
[ 9] Minutes logged : 6617                     [23] Locked out      : NO
[10] Novell name    :                          [24] Never delete    : NO
[11] File overrides : 0                        [25] Login siren on  : NO
[12] Conf overrides : 0                        [26] Hide private    : NO
[13] Read mail mode : Scroll                   [27] Hide deleted    : NO
[14] Quote reply    : NO

Edit [1..27], [F]ind Alias, [S]earch Alias, [H]elp? [  ]
```

The system operator may change any of the entries displayed by selecting the corresponding item number to edit. Keep in mind that some of these settings are generated by *WILDCAT!*'s internal operation, such as the number of files uploaded, etc. Use caution in changing these values. Although most user database items are self-explanatory, we will review a few of the fields for clarity.

Exp Date—The expiration date for the user. This item is used by subscription management programs to lower a caller's security access by changing security profiles when the date arrives. In the definition for each security profile a level for expiration is established. When the expiration takes effect, the caller's profile is changed by *WILDCAT!*. For additional information on operation of a subscription system, see the subscription section in *Features in Depth.*

User Since—Indicates the date and year of the user's first call to the system, and never changes unless altered here.

Memo Date—This field is unused by *WILDCAT!* and is available to the system operator. It may be used to track any dated information needed.

Page avail—A toggle to establish whether the user is available for inter-node chat. This is configurable by the user from [Y]our settings on the main menu.

E-prompt—Abbreviation for erase prompt. If toggled to Y the pause prompt at the end of a screen -pause- [C]ontinue, [S]top, [N]onstop is erased using the backspace character when a response is made. If set to N the prompt will remain on screen and a new line will begin. This feature is present for callers whose systems cannot handle the backspace character. This item is configurable by the user in [Y]our settings.

N-Mail bal—Tracks credits for charging users for message entry on a per message basis. Full details are covered in the Netmail section of Chapter 10

Acct bal—Tracks credits for charging users for BBS use in general. It may be manipulated as part of a subscription system, and is discussed in more detail in that section of *Features in Depth.*

The [**E**]xtra screen of information on each user also has some fields that may need additional explanation:

Alias—A fictitious name selected by the user which is used in conferences that support alias names. Each user may select an alias from the [Y]our settings option, but *only* in a conference supporting alias names. It does not appear as a user choice in other conferences.

Title—Titles are assigned by the sysop and may not be altered by the user. Titles are displayed in parenthesis next to the user name in messages, and may be used to identify the user as co-sysop, President, tech help, or other identifying title. Titles can be turned on or off on a conference by conference basis by the sysop by editing the user's [C]onference information.

New Files—This date reflects the last time the user made use of the [N]ew files command in the File menu.

Minutes logged—Reflects the number of minutes logged on the current or last day called.

Quote reply—Determines if the entire contents of the original message is automatically placed in the text of every reply. This item is configurable by the user in [Y]our settings. Even if set to N, a user can quote all or part of the original message, but must use the [Q]uote command during message entry.

Novell name—By filling in the user's Netware login name, *WILDCAT!* can use that information to compare with the Netware Full Name, allowing for automatic-login with Novell networks.

File overrides—Allows the sysop to activate an individual user for download access to file areas not already allowed by the user security profile. This override feature is designed to let a sysop add one or two extra file areas to a caller as a special option to avoid creating a special security profile for a single user.

Conf overrides—Similar to file area overrides, the conference override is used to extend a user's rights to conferences outside those allowed by his security profile. A sub-menu allows setting, clearing and viewing all overrides.

Time left—Reflects the number of minutes of use available at the end of the user's last call. It is reset if the next call comes in on a new date.

Last conference—Tracks the conference the user said [G]oodbye from on the last call. On the next call the user is placed in the same conference.

Locked out—A locked out user has no access abilities on the BBS regardless of security profile or other user settings. This flag is set to Y by the *WILDCAT!* security provisions if configured to do so in MAKEWILD.

Never delete—Indicates a user whose record should not be deleted by utilities such as *wcPRO*, even if it matches the criteria set for deletion. It is designed to be assigned to the sysop record and other permanent user names.

Clear msg—Determines whether each message clears the screen prior to display. It is a user definable setting from [Y]our settings.

Login siren on—When set to Y causes a series of beeps to alert the sysop that the caller is logging in. No notice to the caller is given.

Hide Private mail—A flag that is used to indicate the user cannot read private mail, even if sysop status is granted. The default is N, indicating that the user (if a sysop or co-sysop for messages) is allowed to read private mail in the conference. This flag is in addition to the general BBS flag that can be used to allow or disallow the sysop to read private mail. If the general flag in MAKEWILD is set to disallow reading private mail, then this flag has no effect.

Hide Deleted mail—Another flag used to override the user's ability, if a sysop, to read deleted messages. The default is N, indicating that the sysop is allowed to read deleted mail.

Edit Commands

The user database Edit Command is displayed after each record as follows:

[N]ext—Next alphabetical record in series, following the criteria set up by both Search and Match set, if any. The [ENTER] key also performs this function.

[S]earch—A full or partial user name is required for the search, and the sysop may decide whether or not to view each successful find. This command takes longer to locate a match since it must scan open and then scan every record for a match. To abort a search simply answer Y when asked if the screen contains the user you wish to view.

[M]atch—Permits entering a user Security profile or Expiration date as search criteria. All users matching this profile or expiration date are displayed one at a time. Pressing [ENTER] at a blank Match prompt resets the Match to NONE. The status of any Match/Set is displayed at the top of the screen and is reset to NONE when the last matching record has been displayed.

[F]ind—Prompts for *full* user name to locate a particular user.

[A]dd—Manual entry of a new user. This is useful for pre-registration purposes.

[E]xtra Info—Displays the second screen of user information. The display returns to the main user record screen when ENTER is pressed with no editing selection.

[C]onference—This command allows changes to a user record for items that are conference specific. A sub-menu of four items is presented:

```
Steve Crippen from Bakersfield, CA

Conference: WILDCAT! Support

[01] CoSysop - Messages      : NO
[02] Locked out              : NO
[03] Title off               : NO
[04] Last message read       : 1458

Edit Command [1..4]? [ ]
```

In each user record the sysop can specify that the user has modified rights when in each conference. These are special items not normally assigned, except to special users.

CoSysop - Messages—Indicates a user has special rights to the message database in the conference. A co-sysop is able to read and edit all mail unless reading private messages has been disabled for the entire BBS. A co-sysop for messages can also use the message [S]ysop command to move messages to another conference, copy to another conference and toggle the public/private flag. Use this option with caution, as it can in certain circumstances grant co-sysops access to the user database through relational links.

Locked out—A flag allowing the sysop to revoke conference access from a user on a temporary basis. A user locked out of a conference will not be allowed to use the [J]oin command to change to that conference, and will be advised of the lockout. Note that the lockout will not expel a user from a conference that he is already in. The sysop should check the user's last conference flag and change it to another conference if it reflects the conference to be revoked.

Title off—Allows the sysop to turn off a user's title in some conferences, and allow it to be displayed in others. By default a title is displayed in all conferences.

Last message read—Indicates the last message number read by the user in the conference. This number is updated automatically by *WILDCAT!*, and usually does not need manual adjustment.

[P]rev (Previous)—Goes back one user record alphabetically, and follows the established search criteria set up by the Match/Set Level if being used.

[D]elete—Deletes the current record from the database.

[W]rite message—Creates a message addressed to the user whose record is displayed on screen, without leaving the database screen. This feature is handy for leaving notification to users advising them of updates or changes to their status. It can only create messages in a conference that both the user and sysop have access to. After message entry is completed the sysop is returned to the User database screen.

[H]elp—Displays a help file

[J]ump—Jumps to an alphabetical location by last name. For example, entering HAR will take you to the first user name beginning with HAR, or the first one following HAR if there is no exact match.

[Q]uit—Returns to the Sysop Menu.

File Database Maintenance

```
Record #          : 325                          Match : NONE

[ 1] File name    : ACHAT212.ZIP                 [16] Times Dnld'd    : 432
[ 2] Date         : 01/22/93  2:18pm             [17] Cost            : 0
[ 3] Last access  : 01/22/93  2:18pm             [18] On CD-ROM       : NO
[ 4] Size         : 18,965                       [19] No charge       : NO
[ 5] Uploaded by  : GWEN BARNES                  [20] Never OWrite    : NO
[ 6] Password     :                              [21] Password req    : NO
[ 7] Key 1        : ACHAT                        [22] Never delete    : NO
[ 8] Key 2        : MAGAZINE                     [23] U/L in progress: NO
[ 9] Key 3        : DECEMBER                     [24] Stored offline : NO
[10] Key 4        : 1992                         [25] Long Desc.      : NO
[11] Key 5        :                              [26] Failed Scan     : NO
[12] Key 6        :
[13] Area         : 1 - BBS Advertisements
[14] Short desc.  : A-CHAT Magazine (December, 1992) A Magazine for the BBS'ers
[15] CD Path      :

Edit   [1..26], [S]earch, [N]ext, [F]ind, [R]ead, [X]fer, [H]elp, Fr[e]shen,
[A]dd, [M]atch, [D]elete, [P]rev, [J]ump, [V]iew, [C]opy, [U]ser, [Q]uit?
```

The file database contains complete information about files available for download throughout the entire system. Most access to the file database is made from the sysop menu choice [F]ile Database, but that is not the only way.

A user with sysop privileges can also access this information while reading a message. After reading each message, the command line includes the option [S]ysop, which allows access to the file database with a single keystroke. This option is useful to check on file information discussed in a message, and to immediately return and reply with the information.

Regardless of how the file database is reached, the display is the same. Records are shown in alphabetical order by file name. The system operator may change any of the fields displayed by selecting the corresponding item number to edit. Although most file database items are self explanatory we will review a few of the fields for clarity.

Password—This field contains the password needed by anyone to download the file. It is not used unless the adjacent field "Password Required" is set to Y.

Key 1 - 6—The six keywords associated with each file are used for the fast indexed keyword search function on the file menu. The keywords can be entered by the user after uploading the file, or can be generated from the short description

text. This choice is a configuration item in MAKEWILD. For an explanation of just how keyword searches operate, see the file menu discussion of the Text search function.

Area—This is the file area number and name assigned to the file. It indicates exactly where *WILDCAT!* can locate the file by drive and directory path. Changes to this field result in movement of the file from the old drive path to the new location on disk. This option does not alter the file date and time when a change is made. See the [X]fer function for movement of files with automatic change of the date and time.

Short Desc.—This is the short description for the file which will display when a user lists files in single or double line format from the file menu. The text in this description line may be edited by the sysop.

Times DL—This is the number of times the file has been downloaded.

CD Path—If the "On CD-ROM" flag is YES, this line contains the true path to the file on the CD. When a caller downloads a file flagged in this manner, *WILDCAT!* will use this information to retrieve the file, rather than looking in the file area path defined in MAKEWILD. See the CD-ROM section in *Features in Depth* for additional information.

Cost—A number indicating the amount of user credits required to download a file. If activated, a caller must have enough credits in his User account or the transfer will be prevented. If the user has enough credits, this amount will be deducted from his balance. See the section on subscriptions in *Features in Depth* for additional information.

On CD-ROM—If this flag is set to Y, all *WILDCAT!* file search routines make use of a disk based compilation of the file names rather than scanning the actual CD, saving considerable time. See the CD ROM section in *Features in Depth* for additional information.

No charge—Allows download of the file regardless of user account balance and regardless of the restrictions of number of downloads allowed or download K-bytes allowed.

Never OWrite—Prevents anyone from overwriting the file, even if they have overwrite access based on security profile. All incoming files with the same name will be forced to be renamed or discarded.

Never delete—Prevents the file from being deleted from the database (not from disk) until this flag is set to N. It is designed to prevent utilities from erasing selected files that may match a search criteria for mass deletion.

U/L in progress—This flag is set to Y immediately when an upload is begun, and prevents another caller from sending the same file during the transfer. It also prevents the file from being listed as available until the upload is completed. This should never be set to Y unless the file is actually still being sent.

Stored off-line—This flag is used to include a file in the database that is not available on disk. Off-line files are included in listings of files, but cannot be downloaded. If a download of an off-line file is requested, the user is informed that it is not available online at this time, and a message to the sysop is generated informing the caller of the request.

Long desc—This flag indicates whether an extended description, up to 15 lines, is available for the file. If one is available it may be deleted or edited by selecting this field. If one is not available it may be added by changing the flag to Y. Creating or editing an extended description is done using the message editor. All editing functions are available. The text of the extended description is stored in the file database along with the file, *not* in the message system.

Failed scan—This field is set to Y by *WILDCAT!* for any file that fails the virus scan option after an upload. If set to Y, no file access whatsoever is allowed.

Edit Commands

The file database Edit Command is displayed after each record as follows:

```
Edit   [1..26], [S]earch, [N]ext, [F]ind, [R]ead, [X]fer, [H]elp, Fr[e]shen,
[A]dd, [M]atch, [D]elete, [P]rev, [J]ump, [V]iew, [C]opy, [U]ser, [Q]uit?
```

[S]earch—Requests full or partial file name required for search, then provides the option of saying yes or no to each successful find. This option takes longer since the text entered may be located anywhere in the filename.

[N]ext—Displays the next file in order, following the [M]atch/Set criteria, if any. Performs the same function as the ENTER key.

[F]ind—Prompts for *full* file name to locate a particular file.

[R]ead a file—This choice is the same as reading a text file from the file menu. It may be used to review or check the contents of ASCII files without leaving the sysop menu.

[X]fer—This option is used to move a file to another file area, much like changing the file field #13. The difference is this function also changes the file date and time in the database to reflect the current date and time. It provides an easy way to move files from a temporary holding area, perhaps while using [M]atch/Set, to the correct area for download. It results in the file date stamp being updated to properly show the file as new.

[H]elp—Displays a help file.

Fr[E]shen—Changes the date and time of the file to reflect the date and time of the file on disk.

[A]dd—Allows manual entry of a new file. If the file already has been placed in the appropriate file path, *WILDCAT!* will bypass the prompt for both file date and size and make use of the correct information from the disk.

This option also allows adding entire subdirectories of files easily by using *.* as DOS wildcard characters. To add a new file area you first create the new area in MAKEWILD and assign the proper directory path. Then use the [A]dd function to specify the filename as *.* and *WILDCAT!* will add all files located on the disk in the file area path. If you have added a large number of files to an existing area you can also use this feature to add *.* since *WILDCAT!* skips all filenames already in the database.

[M]atch—Permits entering a file area number, keyword or uploader as search criteria. All files matching the match criteria are displayed. If area is used as a match criteria, all files contained in the area are displayed one at a time, in alphabetical order. Pressing C/R at the Match prompt resets the Match/set area to NONE, as does reaching the end of the files matching the criteria. The status of the Match/Set is indicated at the top of the screen. Using the uploader as a match criteria allows easy viewing of all files uploaded by a particular individual.

[D]elete—Allows deletion of an entry in the file database with an option to delete the file from the disk also. A file may be deleted only from the database, in which case it remains available on disk but may not be downloaded or otherwise accessed by anyone.

[P]rev (Previous)—Goes back one file alphabetically, matching the Match/Set criteria (see below) if being used for search criterion.

[J]ump—Changes to any portion of the alphabet by entering the first few letters of any filename desired. For example, entering T takes you to the first file beginning with the letter T, but entering TOM takes you to the first file beginning with TOM.

[C]opy—Prompts for a DOS drive and path, then copies the current file to that destination.

[U]ser—Displays the user database record of the user who uploaded the file. Full access to all user database records is allowed with immediate return to the file database at the point where this command was selected.

[V]iew—Performs the same function as the [V]iew a compressed file from the file menu.

[Q]uit—Discontinue file database maintenance, return to sysop menu.

[**ENTER**]—Advances to the next file alphabetically, matching search criterion, if Match/Set has been requested.

Subscription Systems

WILDCAT! can be configured for several types of subscription or paid access. The control of a subscription system depends on what type of charges are to be levied on callers.

All subscription tracking is based on expiration date or user **credits**, each of which is tracked in each user record. A single credit can be assigned to any value desired, but must be consistent throughout the system. It is not formatted in any manner in order to support any currency desired. For example, a credit could be equal to one cent, in which case *WILDCAT!* can track up to $9,999.00 for each user.

Disclaimer

It is the responsibility of the sysop to properly increment the user's account balance when payments are received, and to retain ACTIVITY LOG entries for verification, if desired.

Mustang Software makes no representations that the accounting and credit tracking is an audited system, and does not warrant that it will operate properly under all conditions. DO NOT RELY ON THIS ACCOUNTING AND BILLING SYSTEM AS THE SOLE BASIS FOR A COMMERCIAL OPERATION.

Charge per calendar period

The first method of charging for access makes use of the expiration date option in each user record. Typically this method is used for charging for system access on a calendar period basis such as $5 per month or $75 per year. In this case the sysop can enter an expiration date in the user record and have *WILDCAT!* change the caller's security profile on the first call after that date. Each security profile has an Expired Profile Name as part of the definition. The date of each call is compared to the expiration date and the caller is allowed to proceed with no messages or interruption if the expiration date is more than 60 days away. On the first call within 60 days of expiration, *WILDCAT!* displays WARN60.BBS to the caller. This file may contain information on how to renew a subscription, and could include the @ code for the number of days until expiration. On the first call within 45 days of expiration, *WILDCAT!* sends the display file WARN45.BBS to the caller, and another at 30 and 15 days (WARN30.BBS and WARN15.BBS). Nothing is sent to the caller if these files do not exist in the display file directory.

On the first call after the expiration date the caller's security profile is changed as indicated in the current profile. The new profile would usually limit access to at least some areas of the BBS.

Charge per file

A second method of charging for system use makes use of the ability to charge a defined number of credits for some or all downloads. Each file record has a field called "Cost" that allows the sysop to specify the charges deducted from the user's account balance each time the file is downloaded. Each file can have a different cost level, and this method can be combined with either of the other two if desired.

If a caller does not have enough credits in his user account to cover the cost of a download, it is denied.

Virus Scanning

WILDCAT! has a provision for scanning every upload immediately after being received while the caller is still online. This feature is implemented *if the file SCANFILE.BAT is found in the Home directory* (usually C:\WC30).

Operation of the virus scanning feature is totally dependent on the batch file. The only parameter passed to the batch file is %1 which represents the complete drive, path and filename uploaded to the BBS. The upload path may be any BBS area to which the caller had access when the upload was begun. Usually the program used to perform the scan copies the file to its own temporary directory for processing.

The scan is *always* performed using a shell to DOS, and requires the system to have enough memory available to execute the SCANFILE.BAT programs. This is another reason to make use of the Swap to DOS or EMS feature in MAKEWILD.

When the shell is completed *WILDCAT!* determines if a virus was detected by looking for the file **SCANFILE.BAD** in the Node Work directory. This file is a dummy file that must be created by the batch process *only if the file failed the scan.* If the virus scanning program returns an errorlevel to indicate a file with a virus this file can be created with the batch file line:

```
IF ERRORLEVEL 1 COPY C:\WC30\ALL.OK SCANFILE.BAD
```

If the above command is executed from the Node Work directory the SCANFILE.BAD file is created in the proper location. The dummy file ALL.OK must exist in the Home directory for proper operation. SCANFILE.BAD is erased automatically by *WILDCAT!* if it is found.

When a file fails the virus check test it is kept in the same directory to which it was uploaded. It is important that it *not* be moved to another area by the batch process since *WILDCAT!* has not yet finished with the upload process.

When a file fails the check the *Failed Scan Flag* in the database is set to Y which prevents *anyone, including the sysop,* from downloading or listing the file. A note is also placed in the ACTIVITY log indicating the virus scan failure. It is the responsibility of the sysop to take action to dispose of or further check the file.

There are several shareware programs available to perform the virus check. Most work in conjunction with McAfee's virus check program, and some perform scans within layered .ZIP files as well. If you intend to activate virus scanning you should call the *WILDCAT!* HQ BBS and check for the latest in support programs for this feature.

Note that for proper operation *WILDCAT!* expects the same filename to be returned after the virus scan that was sent to the SCANFILE.BAT. Manipulations may be made in the scan process, but the filename must be unchanged.

CD ROM Disks

WILDCAT! supports CD ROM disks in a special way. The typical problems encountered with offering downloads from a CD ROM disk revolve around the slow disk access on these drives, especially when a program performs DOS directory searches. A second problem is getting the names and descriptions of all programs available on the disk into *WILDCAT!*'s file database.

The solution to these obstacles is twofold. First, to avoid making time-consuming DOS filename searches on the CD, a utility program named WCFILE.EXE creates a substitute file on your hard disk for every file offered on the CD. This zero-byte dummy file on the *standard hard disk* has the same name as the CD ROM file. It is used to perform all DOS searches, and since it is a zero-byte file, thousands can be created and occupy only a small amount of directory entry space.

When assigning file area definition in MAKEWILD for CD ROM files you should assign subdirectories on your *standard hard disk* as desired. All files can be assigned to a single file area, but it may be wiser to establish multiple areas to allow categorizing the files. The dummy zero-byte files are created in the subdirectories on your standard hard disk. This process is more fully explained in the documentation for *wcFILE* in *Chapter 9*.

Since the substitute zero-byte files are not actually the files to be sent when a download is requested, there needs to be a method of locating the actual files on the CD ROM disk. *wcFILE* handles this as well by storing the full drive and path on the CD for each file in the file database record field "CD Path".

The second part of the process is to create the descriptions in the file database. Since most CD ROM disks contain an index of files available in a text file, *wcFILE* reads these text files and imports the information. *wcFILE* can be configured to parse most text file formats and import the names and descriptions into the file database. While doing so it also flags them as available on CD-ROM (each file has a flag called "On CD-ROM").

As an example, suppose the CD-ROM disk is addressed as drive E:, and the files are located in hundreds of numbered subdirectories. You may elect to assign all utility files on the CD to file area [7] called "Utilities on CD ROM". You would then use MAKEWILD to create a new file area with that name, but you would assign the file area path as C:\WC30\UTIL-CD\

When *wcFILE* is told that a file, perhaps MYUTIL.COM, is in the file area "Utilities on CD-ROM," it creates a zero-byte file in C:\WC30\UTIL-CD called MYUTIL.COM. This file is only used for searches. The actual path to the downloadable file is stored in the file record as E:\22865\UTIL\MYUTIL.COM

Why do all this? For faster access. When a file search is requested (the [**T**]ext Search menu choice), *WILDCAT!* allows searching for files based on filename (*.* is the default) and several additional criteria. Whenever a search is initiated *WILDCAT!* processes the request by first checking the files on disk using the appropriate filename mask, and then checking the database for matches of other criteria. Using this DOS filename check significantly reduces the search time required, especially when the filename mask is restricted (*.PAS or WILD*.*). This method of searching works very well *except* when the files to be processed are located on a CD ROM with slow access. This is why we actually create a file by the same name on the standard hard disk.

When a download request is received for a file, *WILDCAT!* looks to the file database record and extracts the file area in which it is located. The area is then checked against the MAKEWILD configuration record and the subdirectory location is obtained. For a normal file (non-CD ROM) the download is then started by sending the file located in the subdirectory. However, if the CD ROM flag is set to Y, *WILDCAT!* looks in the CD Path to read the actual location of the file on the CD ROM.

Using our previous example, if a request to download MYUTIL.COM was received, *WILDCAT!* would look in the file database and see that the file area was listed as [7] - Utilities on CD-ROM, and would check MAKEWILD to find that area is C:\WC30\UTIL-CD. Since the CD ROM flag was also set in the file database, *WILDCAT!* will not try to send out the file from C:\WC30\UTIL-CD\MYUTIL.COM, but will instead read the CD Path and find it says it is actually located in E:\22865\UTIL\MYUTIL.COM.

See the documentation for WCFILE.EXE in *Chapter 9*.

MHS Gateway

WILDCAT! is capable of integrating with several other personal mail systems, including any application that can receive MHS routed mail. Novell's Message Handling Service (MHS) is a store-and-forward mail system that operates in conjunction with a Novell LAN installation or as a stand-alone system on a dedicated PC.

MHS messages can be entered from within any application with support for MHS. Many LAN E-Mail systems allow routing via MHS, and any MHS aware application can send or receive messages with any other. The only prerequisite is that each mail location must configure the MHS application to recognize the names and addresses of the people with whom they want to communicate.

Applications supporting MHS include *WILDCAT!*, cc:Mail, Da Vinci eMAIL, and several others.

The MHS Gateway connection is available from Mustang Software. Call for details.

wcUUCP — Internet E-Mail and Newsgroup gateway

The latest addition to the Wildcat! family sends and delivers E-Mail and Newsgroup mail between your Wildcat! BBS and your UUCP host. Get into the fast lane on the electronic data highway, and start talking to the world!

USENET Newsgroups and Internet E-mail are supported, and the package comes with everything you need: configuration, mail import/export, and dedicated UUCP communications software.

The wcUUCP Gateway is available from Mustang Software. Call for details.

Chapter 8
Multiline Operation

"The first thing you probably noticed about your new Netware purchase is that you receive enough manuals to open your own library. The good news is you won't have to read them all tonight"

Novell, Incorporated - December 1988 Edition
SFT Netware 2.15 Guide to manuals

In this Chapter...

- Hardware choices
  Novell, LANtastic, and others
- Multi-tasking with a single 386
  DESQview
- Inter-node chat and other multiline features

LICENSE

As indicated in the Software License Agreement, any multiline version of *WILDCAT!* may be used "on multiple computers that are connected by direct cable to the same network server". It is not licensed for use at multiple locations.

Updates provided by Mustang Software, Inc. are addressed under the license agreement, and users are prohibited from selling, giving away, or otherwise transferring a previous version to another party after obtaining an upgrade.

Any questions regarding your rights under the Software License Agreement should be directed to a corporate officer of Mustang Software, Inc. for clarification.

Overview

Users installing the multiline version for the first time, as well as those upgrading from a single-line version, should first set up a single line system. Follow the instructions in the *Installation* section in the front of this manual to complete a single-line system, *then* add additional lines according to the information given here.

Microsoft Windows, OS/2 and other operating environments

WILDCAT! is not a Windows or OS/2 Application. Some sysops have successfully run *WILDCAT!* under Windows or OS/2, however due to the various ways Windows and OS/2 can be mis-configured, we do not support or recommend running *WILDCAT!* in these environments. This is especially true for multiline operation. Windows .PIF files, and OS/2 setup information files are available on our support BBS, but operation and configuration is the responsibility of the sysop.

Upgrade From Prior Versions

Follow the instructions provided in the *Installation* section. Follow the documentation carefully and do not attempt to add a second line or to alter your disk structure until you have successfully installed and operated in a single line configuration. At that point you are ready to embark on changes necessary for additional lines.

First Time Installation

Follow the installation instructions in the *Installation* section in the front of this manual to install *WILDCAT!* on your system.

After completing a single line installation successfully, you may return to this section to embark on changes necessary for additional lines.

All Users

Reading this section of the documentation may be helpful in bringing up a single line system, but we must emphasize that *single line operation is absolutely necessary prior to multiline* to ensure that all database structures are initialized and operating properly. When you have successfully completed installation of a single line *WILDCAT!* system, return here for additional configuration details.

How it Works

When writing the program code for a multiline BBS system there are at least two ways of addressing the task of talking to more than one communications port at the same time. The first makes use of *internal task polling* where a program on a single PC/AT handles the port addressing for all lines, and internally directs the program responses to the ports as needed. This type of setup has the advantage of needing only the one computer, but is limited in that it cannot easily perform any BBS activities that require outside program or DOS shell support. It is not possible to run doors, external protocols, or any other program as a sub-process, and LAN access is not possible.

The second uses *multiple-program operation*, a method in which a separate copy of the BBS program is loaded into memory for each line or node. This type of setup allows the flexibility for every individual line to perform whatever activity or BBS maintenance event is desired, while allowing the remaining lines to perform independent activity. It also allows full network support and interconnectivity. The disadvantage is the extra memory required for multitasking software, or additional hardware for network operation.

WILDCAT! makes use of this second method of multiline operation for the advantages it offers. This type of setup is required for doors, external file transfer protocols and LAN access in a multiline system.

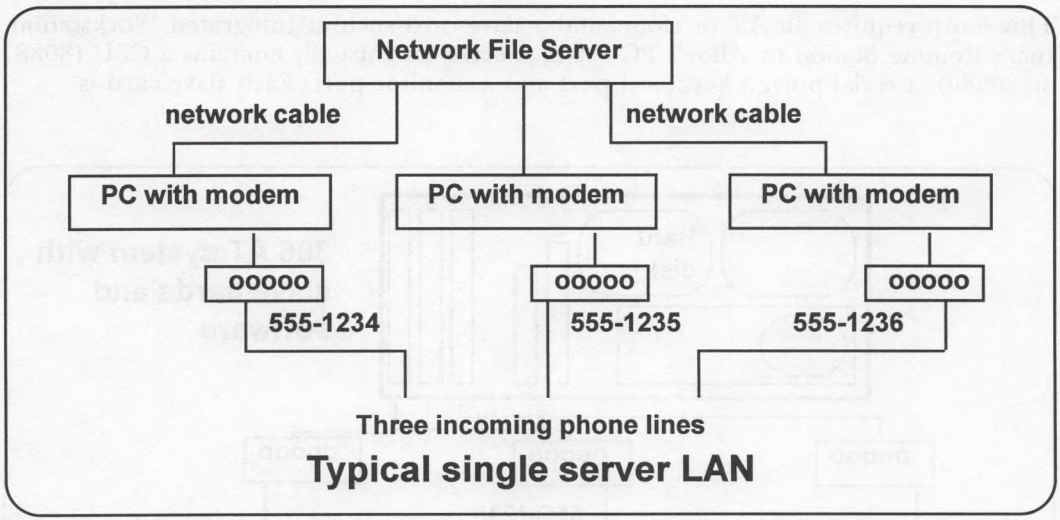
Hardware

Prior to explaining the procedures for setting up a multiline BBS we will review the necessary hardware and software combinations that may be used. In the following discussion the term "multiline" is synonymous with "multi-node", and the two may be used interchangeably. Likewise, both a "line" and a "node" refer to a single *WILDCAT!* session connected to a single modem and phone line.

We have designed all *WILDCAT!* multi-node versions to operate in single line mode on a single PC system, or in multiline mode in any of three general configurations:

Local Area Networks

WILDCAT! includes support for file and record locking under Novell, 3-COM, Banyan Vines, PCMOS 386, Net/OS (CBIS Net), LANtastic, and any networks that *truly* support DOS SHARE. Keep in mind that a number of peer-to-peer networks claim support of SHARE but do not actually have it.



Typical single server LAN

In a LAN environment, each *WILDCAT!* line operates on a separate computer connected to the other PCs or ATs via network cable. Each node runs its own copy of *WILDCAT!* which is loaded from either its own hard disk or from a network "server's" hard disk. A "server" in this context is used to define any computer in a LAN setting that allows sharing any of its peripherals such as hard disks, printers or other devices. Some network configurations only allow sharing programs located on

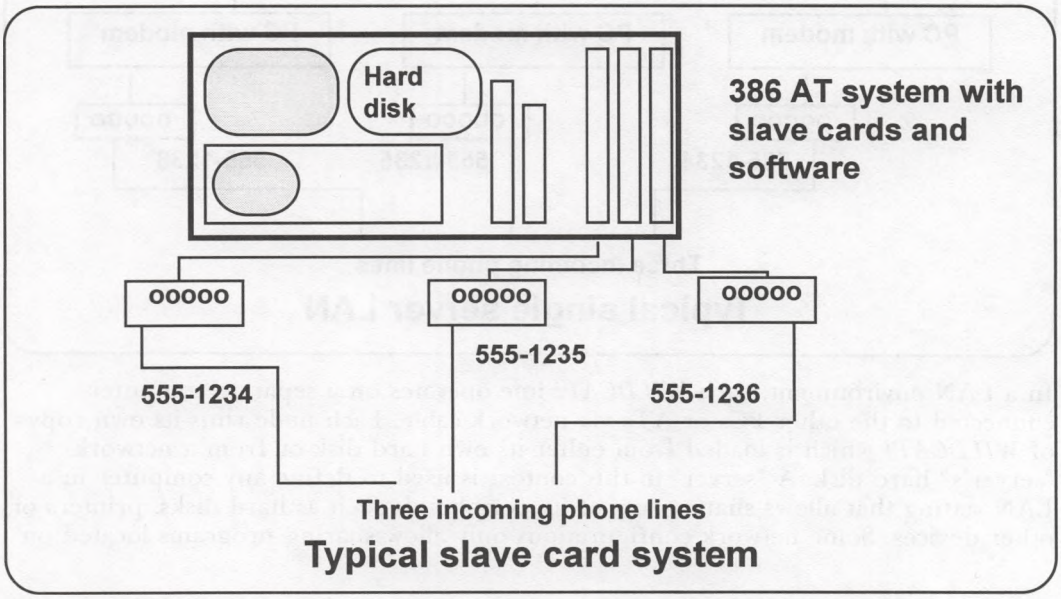
a *dedicated* server, one that only performs LAN management functions. Others enable sharing of disk devices located in other workstations and are normally referred to as peer-to-peer networks.

In a network which allows multiple servers, the server computers can also be used as a workstations for a *WILDCAT!* node. Each workstation running *WILDCAT!* is assigned a separate and unique *WILDCAT!* Node ID Number. More on the Node ID later, but for now just make note that each node has a different Node ID number.

Regardless of the type of network used, only one copy of the *WILDCAT!* program and support files needs to be kept on the disk. This one copy is available to each workstation running a *WILDCAT!* node. All workstation nodes may update and access a common set of message, file, and user databases if desired. Each node requires its own PC (512K suggested, single floppy is ok), a modem, a telephone line, and a connection to the network. Local logon sessions on a network do not require a modem or phone lines.

Slave Card

This setup requires an AT or clone, and a slave card such as Integrated Workstation Inc.'s Remote Station or Alloy's PC-Slave. A slave card usually contains a CPU (8088 or 80286), a serial port, a keyboard port and a monitor port. Each slave card is



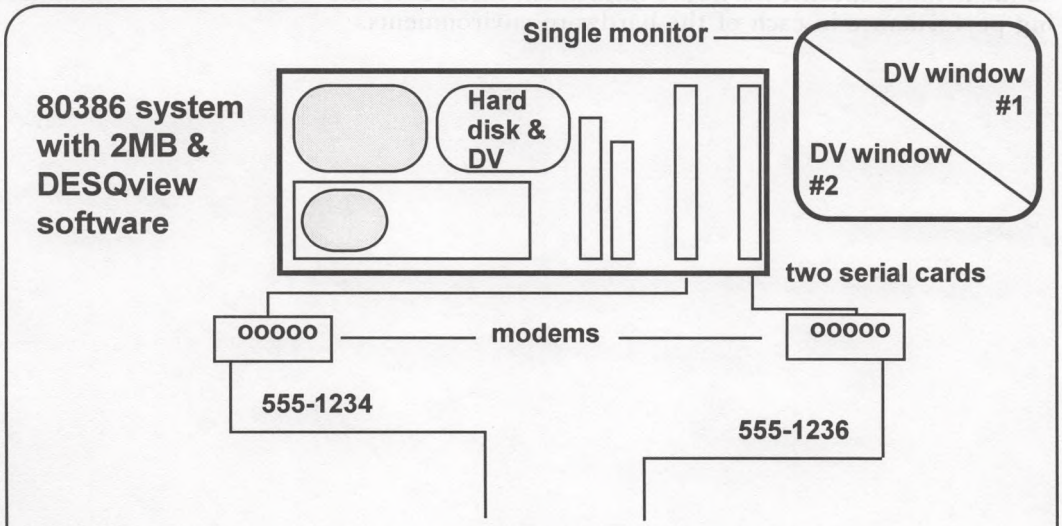
Typical slave card system

actually a PC on a card that shares the other peripherals in the PC, including the hard disk, by establishing a LAN, but right inside the PC. Alloy uses NET/OS while Integrated Workstation's cards support Novell, including bridged server support.

In brief, a slave card environment is one in which a single machine adds one or more slave cards with a modem and phone line connected to each slave card. *WILDCAT!* is loaded in the memory of *each* card just as if it was a separate PC system, and it uses the shared hard disk of the main system for storage. Some slave systems allow viewing access to each slave PC environment via the main system keyboard and screen. The cost factor in this setup can approach or exceed the LAN setup, depending on the network type and PC cost. The advantages of incorporating slave cards becomes apparent when a multi-node dial-in system is to be added to an existing Novell network without adding multiple PCs. The Integrated Workstation solution allows linking multiple bridged systems, each with multiple Remote Stations.

DESQview

For those interested in running only 2 to 4 nodes, it can be done on a single 80386 system under DESQview, a multitasking operating environment available from Quarterdeck Office Systems, 150 Pico Blvd., Santa Monica, CA 90405, (213) 392-9701. Although very fast 80386 system combinations may be able to run 4 or 5 nodes, we have found that performance will suffer significantly on slower systems when more than 2 serial port applications are opened.



Typical DESQview setup

We only recommend 2 ports under DESQVIEW unless you are prepared to upgrade your serial port UART chips, and are using a 386/20MHz or faster.

DESQview setup involves purchasing DESQview 386 from Quarterdeck, and installing it on your 80386 system. In order to establish 2 DESQview applications you will need at least 2 MB of total system memory to allow mapping by the QEMM device driver.

This type of multiple line installation is the only one in which the performance of the BBS program *may* be hindered, due to DESQview's time-slicing. By contrast, both LAN and slave cards offer almost full throughput with no degradation. The number of nodes actually possible under DESQview will depend on a number of variables, including the speed of the microprocessor & clock, the baud rates of the connections supported and the speed of the hard disk.

Although we recommend a maximum of 2 nodes in most DESQview environments, there are a number of situations which may allow additional nodes to be added. If an exceptionally fast 386 CPU is used you may very well find that an additional node or two can be added with only minor impact on performance. Likewise, if the majority of your callers will be operating at 2400 baud, or if your BBS activity excludes downloads where speed is a factor, additional nodes may also be possible. Testing in a proposed installation is the only method of determining the actual limits for a system.

The choice of multi-node configuration is left to the user. The section that follows contains more specific hardware installation references and suggestions for maximizing performance in each of the hardware environments.

Software

This section reviews the principles, assumptions and background information needed to successfully operate *WILDCAT!* in a multi-node environment. You should not attempt to install a multi-node system until you have successfully installed a single-line.

Regardless of the method of hardware installation, the software and directory structure is basically the same. This discussion will assume that all *WILDCAT!* related files are stored on a single hard disk in a dedicated network server (or a single hard disk in the computer using the slave cards or DESQview). In reality the subdirectories may be located on any hard disk or subdirectory in any computer accessible by the nodes needing the files.

The file structure for multiline is very similar to that for single line operation. We begin creation of our multiline system with the existing single node in C:\WC30. The *WILDCAT!* program files should already be located in this main area (C:\WC30). The files in this area are made available from any location through a path statement in the AUTOEXEC.BAT file with wording PATH=C:\WC30, or whatever actual pathname is appropriate. This path statement *must* be added to your AUTOEXEC file if it is not already present.

The easiest multiline installation allows all nodes to make use of a common set of files for all system activity. This goal is the basis for many of the default multi-node configuration parameters. Depending on your particular multi-node configuration, this may not always be possible, and we will try to comment on reasons for alternative setup parameters when they are available.

Every node in a *WILDCAT!* multiline system *must* have its own unique node ID number. You may recall that MAKEWILD contains a setting for the first node's ID number, which is saved in the main system data file. All additional nodes must establish their own unique number, and *override* the default setting in MAKEWILD. This is accomplished through the DOS environment.

Environment Variables

The environment is an area in memory established whenever DOS is booted, and is used to store information for use by various system applications. Information is placed in the environment through the DOS internal command SET. This command is executed from the DOS prompt, and may be placed in an AUTOEXEC.BAT or other .BAT file to make the value assignment. The syntax for placing information into the environment is:

```
SET variable=string
```

where *variable* is the variable name used by a program and *string* is the value to be assigned to the *variable*. If *variable* already exists in the environment, it is replaced with the new setting. If you specify just *variable* and the equal sign it removes any previous setting of that variable.

The variable *WILDCAT!* uses to override the default Node ID is called WCNODEID. The correct command to alter it for node 2 is:

```
SET WCNODEID=2
```

The above line sets the node ID variable to 2, and *WILDCAT!* finds it when started, overriding the default of 1 set in MAKEWILD.

If no WCNODEID variable is found in the environment, *WILDCAT!* accepts the default from MAKEWILD. The same is true for several other MAKEWILD settings as outlined below:

```
SET WCNODEID=2        override for the node ID #
SET WCPORTID=2        override for the com port #
SET WCIRQID=3         override for the IRQ
SET WCBASEID=$2F8     override for the com base address
SET WCMDM=ULTRA       override for the entire modem screens
```

As mentioned previously, MAKEWILD saves a default value for each of these when the configuration is saved, but each node can override any that are incorrect for its operation.

For example, every node in a multi-node system must have a WCNODEID setting to override the default set in MAKEWILD. Likewise, a two-node system under DESQview needs the second node on COM2 to establish an override for WCPORTID, WCIRQID and WCBASEID. As an alternative, the node on COM2 could implement a single override for all modem settings with a separate .MDM file, and refer to it by name using the WCMDM= variable. Since an .MDM file contains all the references for port, IRQ and base address, the other three are not necessary.

These overrides can easily be set in an AUTOEXEC.BAT file for each node on a LAN or each CPU when using slave cards. In a multi-node DESQview system the overrides must be placed in the CAT.BAT files used to start each node. We review the specific suggestions for each type of installation after this overview.

Another advantage of using environment variables to hold system variables is their accessibility from any DOS process. Any variable can be included as part of a batch file by calling its name between two % signs. For example, suppose you have used

```
SET WCPORTID=2
```

to override the default of COM1, and want to pass the port number to the program AVIEWCOM.EXE in your VIEWCOMP.BAT file. You can reference it easily by saying:

```
AVIEWCOM %1 COM%WCPORTID%
```

In the above example %1 is the filename passed by *WILDCAT!* and the second item is the com port, which AVIEWCOM expects in the format COM1, COM2, etc. In the example the %WCPORTID% is translated as 2, which is exactly what the program expects to receive (COM2).

The DOS environment size is initially set to 128 bytes and is adequate for most installations. Other configuration items in DOS, such as the prompt command, use environment space and can result in it becoming full when a set command is attempted. If you receive the DOS error message "Out of Environment Space" you should increase it using the /E:##### argument when setting your command processor. Most DOS releases support a command to increase it in CONFIG.SYS such as:

```
SHELL=C:\COMMAND.COM C:\ /e:512 /p
```

See your DOS manual for details for your DOS version.

Example batch files making use of the environment commands are presented for each type of installation.

Work Directories

In order to accommodate temporary files used by individual nodes, *WILDCAT!* automatically creates a NODE WORK DIRECTORY for each node that operates on the system. When first started, *WILDCAT!* creates a subdirectory named WCWORK directly below the HOME directory. This work directory provides a static location for individual work directories for each node on the system. For node 1 a directory path is created named C:\WC30\WCWORK\NODE1, and similar names are created for each active node.

The work directory is used for a number of things, including all temporary processing done by the node. Actually, almost all batch process are run from the node work directories including doors, external protocols, events, viewing compressed files, dropping to DOS and all menu hooks. However, in keeping with our goal of eliminating duplication of batch file processes, all nodes can make use of a single set of batch files in the HOME directory, which are copied to the NODE WORK directories when needed.

We have reviewed the multiline criteria which apply to all configurations, and proceed now with a short discussion of installation considerations for several specific types of networks and multitasking systems. Review the section dealing with your particular installation.

Novell

Novell, like a number of good networks available, offers a great deal of configurability which is useful in a *WILDCAT!* environment. We suggest making note of the following specific network options with *WILDCAT!* multi-node.

Novell does not require loading the optional Novell NetBIOS module at the workstation level when loading *WILDCAT!* from a network disk. Simply load the workstation shell with ANET3 (ver 2.0a) or IPX and NETx (ver. 2.15 and 386). *WILDCAT!* directly supports Novell without SHARE or the NetBIOS programs. The exception to this is when *WILDCAT!* is loaded from a non-network disk such as drive C:, *even* if the PC is attached and active on the network. Use of a non-network drive is supported without SHARE under Novell, as long as *WILDCAT!* is *loaded* from a network drive. If a combination of local and network drives is used, the *WILDCAT!* data files (databases) MUST reside on the network drive.

Novell offers several versions of Netware from the older ELS Levels to the new Netware 386. We have found that Advanced Netware ver. 2.15 and above are capable of combining the DESQview option with the network to run two nodes on a single workstation. This configuration allows operating a 6-9 line BBS on only three 386's connected as Novell workstations, with each 386 workstation running 2-3 BBS lines. Even more lines are possible on a Novell workstation suitably equipped to run the Intelligent Multiport version of *WILDCAT!*— consult MSI technical sales staff for more information on this option.

Establish a user name such as NODE-1 etc. for each node on the system. Assign the user security access for all rights, and create access to all files used by your *WILDCAT!* system. The user does not need access rights to the rest of the system, except perhaps to the public and logon directories if you want to do system maintenance from the node workstation under the node username. You may also want to establish a group name such as BBS, and assign rights by group rather than individually by node names.

For each node or workstation you must establish a unique *WILDCAT!* Node ID. This is done using the environment variable WCNODEID, and can be set in the workstation AUTOEXEC.BAT file or by using the LOGIN SCRIPT capability of Novell. If the script is used, make certain you use the proper Novell syntax by adding the DOS assignment in front of the SET, and enclose the assignment in quotes, i.e.,

```
DOS SET WCNODEID="2"
```

Note that this command is valid only if used in a Novell login script. To set a DOS environment variable in a batch file, refer to the previous section, titled "Environment Variables".

If all PC workstations in your system make use of COM1 and a modem with NRAM capabilities, you need no other environment assignments, and can use the same CAT.BAT file for every node. Note that all nodes in this example are started from the HOME directory using the same batch file.

The additional batch files needed for other BBS activities such as Doors, Viewing Compressed Files, etc., should be created based on the instruction in the appropriate sections of *Features in Depth.*

Local users may log on to *WILDCAT!* by creating a batch file to set a unique Node ID along with a communications port assignment of 0 to indicate no initialization should be sent to the modem. Then *WILDCAT!* can be started with the command line switch to logon locally, just as our first test login was performed:

```
CD \WC30
SET WCNODEID=21
SET WCPORTID=0
WILDCAT /B LOCAL
```

This results in a prompt for first name, just like a remote login.

In a LAN environment consisting of hundreds of users it may be advantageous to implement the Auto-Node ID assignment feature. This configuration item is in MAKEWILD *General Information - Part 1.*

If a large number of nodes are run on a Novell network, care must be taken to ensure that the maximum number of open files is not exceeded. Since each node opens from 14-17 files during operation, a system of only 6 or 7 nodes could easily exceed the Novell default maximum of 150 files. *See your Novell manuals for instructions on how to increase this number if needed.*

Another setting that has an impact on network operation is the interrupt used for the network interface card (NIC). By default many NICs use IRQ2(9) for operation, a setting which can cause loss of characters or slow throughput, especially with high speed modems. This degradation is due to the fact that lower IRQ assignments take priority over higher ones. Since the standard COM1 and COM2 use IRQ 4 & 3 respectively, it is advantageous to have the NIC use a higher IRQ such as IRQ5 to subordinate network traffic to the communications port.

A Novell system can also make use of the RemoteStation card, a workstation on a card from **Integrated Workstations, Inc.** that allows multiple lines in a single chassis. See the section on Slave Cards for additional details.

LANtastic

This section reviews network considerations for generic peer-to-peer networks using LANtastic as an example. The operational features discussed apply to most similar LANs except for network specific recommendations. From an operational viewpoint, these networks will function much like any other. The primary difference for a *WILDCAT!* installation is the use of multiple "servers." If multiple workstations are used as servers for various system resources, these same servers may also be used as a *WILDCAT!* node. Each node must still be given a unique Node ID using the environment variable command, and will be automatically assigned a NODE WORK directory based on its node number.

LANtastic operates *WILDCAT!* well when configured properly. The following network parameters have been found to increase reliability and improve operation:

DOS ver. 3.3 or above are required, versions 3.2 and lower are not fully compatible with the network communication interfaces.

Create a CONFIG.SYS file with the command

```
FILES=65
```

where 65 is equal to 50 + (5 X the number of *WILDCAT!* nodes installed). For example, a three node system would be 50 + (5 X 3) = 65. Failure to supply enough file handles will cause operational problems in various areas with little or no explanation as to the cause. CONFIG.SYS must also include

```
FCBS=32,32
```

to provide proper file block allocation. These may need to be increased if additional nodes are installed, or if your implementation makes use of NetMail or other file intensive applications. Finally, CONFIG.SYS must include

```
STACKS=32,128
```

to allow additional stack buffer area. See your DOS manual for details of FILES, FCBS, and the STACKS command.

LANtastic is constantly making improvements in their software. In order to achieve the most efficient installation you should check the latest information posted on the Private WILDCAT! HQ BBS. The suggestions given here have been tested and used on both version 2.x and 3.0 of LANtastic. Important notes gathered from various LANtastic users are discussed below.

- In the server setup the number of USERs should be equal to the number of network connections + one for the server.

- The number of NETWORK TASKs should be equal to the number of network connections + one.
- The memory buffers should be set for 8192. Note: We have been advised that the LANtastic print redirection program in some releases causes a variety of network problems with communication processing. We recommend that LANtastic users experiencing unexplained system problems or crashes **remove all NET USE LPT1** printer commands and spooler programs. In addition, all PCs, both workstations and servers, must be given account privileges which **exclude the "P - Peer Privilege"** choice.
- All physical drives used for *WILDCAT!* must be addressed as the same drive letter by *all* servers and workstations. The NET USE command must be implemented to make these assignments. For example, if both PCs in a two line system have a drive C: locally, and both drives are used for *WILDCAT!* files, they both must be reassigned. Each PC should have commands such as

```
NET USE E: \\SERVER1\C-DRIVE
NET USE F: \\SERVER2\C-DRIVE
```

  These assignments allow all MAKEWILD configurations to address the drives with the same drive letter assignments.

The workstations in a LANtastic network do not require a hard disk, and operate well with a single floppy for boot-up. Include the LANtastic software on the floppy with a batch file containing commands necessary to connect to the server, establish network link names, and finally to begin CAT.BAT (or a different CAT2.BAT) from the hard disk HOME directory. There is no need to issue the SERVER command on the workstations,

Again, check the *WILDCAT!* HQ BBS for updated information for best results! The *WILDCAT!* database safety mode should initially be set to PARTIAL for LANtastic and other peer-to-peer systems. If you suspect that a network slowdown may be caused by disk access, you should try changing the safety mode to NONE and see if performance increases. If so, do not be concerned with the lack of a safety mode since any database errors which might occur can easily be repaired with the *wcREPAIR* program.

The use of a small disk cache system with LANtastic is recommended for best performance. Disk caching is one of the trouble spots with LANtastic operation. Their own cache may be satisfactory for your system, and several 3rd party cache programs have been successfully used including Hyperdisk and PC-Cache.

Some peer-to-peer networks are unable to establish a configuration where each workstation makes use of the same drive letter assignments for all physical drives. In these cases, separate configuration files must be used. For example, if each PC has its own physical drive C: and addresses the other PC's drive C: as another drive letter, perhaps E:, then multiple configuration files must be implemented.

The first node is set up and configured in C:\WC30 on PC1 with drive assignments in MAKEWILD referencing the correct file locations on its drive C: and files on PC2 as drive E:. When this configuration has been established it should be copied to the second PC. Remember to copy all files created by MAKEWILD including all .DAT files for security, files, conferences, etc.

The second PC is set up by running MAKEWILD on its own drive C:\WC30, reading the duplicate of the MAKEWILD configuration. All references to *WILD-CAT!* file locations must then be corrected to reference drive E: (PC1's drive C:) and drive C: (PC1's drive E:).

This setup also causes complications for batch files supporting doors and external protocols, and results in two sets of WCWORK directories. In our example, PC1 should make use of the WCWORK directory on its drive C:\WCWORK\NODE1 and PC2 should make use of the WCWORK directory on its drive

```
C:\WC30\WCWORK\NODE2.
```

The above setup is not recommended unless the LAN is incapable of creating a single set of drive assignment letters.

SLAVE CARDS

Follow the same *WILDCAT!* software setup procedures as a network. The only real difference here is that SHARE must be loaded in EACH SLAVE ENVIRONMENT. The exception is when using hardware by **Integrated Workstations, Inc.** since they are fully Novell certified and operate just like a Novell workstation.

Alloy's PC Slave system is established to act much like a network with no cables connecting the individual workstations. Instead, each workstation computer is actually a card installed into the bus on the "server".

Alloy's own network software is NET/OS (formerly NTNX). Set up the hardware and software according to the instructions from Alloy. If the slave cards are populated with 1 megabyte of memory we recommend allocating 512K for the slave partition and the remaining 512K as system disk cache within the OS.

The *WILDCAT!* configuration for a slave card system is established on the server hard disk exactly like any other network setup. The individual slave cards may be accessed by connection directly to the cards via terminals (monitor & keyboard). Alloy cards also operate with a utility program to control slave cards from the server in real time without using additional terminals.

When operating in a slave system, all *WILDCAT!* sessions MUST answer the phone by *Auto-Answer* since Alloy uses the ring detect line (pin 22) internally to reboot the individual slave systems from remote. Using auto-answer may have an impact on your door operations, and you are cautioned to review the disadvantages of using auto-answer with doors or external protocols. See the Doors section of *Features in Depth* for details.

Integrated Workstations, Inc. provides a workstation-on-a-card solution for operation in a Novell environment. The RemoteStation card is a 286 PC that can be placed directly on the bus of a Novell server, or attached to a bridged server to handle all BBS activity. Multiple RemoteStations installed in a bridged server offer an integrated alternative to adding multiple PCs and monitors to a network.

The IWI cards are configured to operate exactly like a standard workstation in a LAN environment. Each has its own boot "disk" on the network, and can set environment variables as needed. The IWI cards are the only slave card solution tested and certified by Mustang Software, Inc. with *WILDCAT!*.

A bank of IWI cards in a dedicated bridged system offers the optimum in multinode access in a single chassis. Each node can be controlled and viewed individually from any workstation using any of several utility programs. Integrated Workstations, Inc. 1648 Mabury Rd., San Jose, CA 95133 (408) 923-0301.

DESQview

DESQview is set up with two windows (or more, limited by your PC), and follows the same *WILDCAT!* software installation procedures as a network. The only real difference here is that SHARE must be loaded prior to starting the DESQview program. There is no need to load SHARE in each DV window. The *WILDCAT!* Network type must be set to DOS 3.x Share.

WILDCAT! is DESQview "aware", and will recognize when it is operating in a DV environment. When the presence of DESQview is detected, *WILDCAT!* automatically performs direct screen writing to an alternate video buffer provided by DESQview. When configured properly *WILDCAT!* is able to run in any size screen window, in foreground or background mode, with no interference with other programs. *WILDCAT!* also automatically relinquishes the time slice when waiting for keyboard or communications port input, providing yet additional speed to other tasks. The program TAME is not required since this function is performed internally.

When DESQview time-slicing is used characters are sometimes lost when the CPU and serial port cannot keep up with the speed of the newer high-speed modems. If your installation makes use of high-speed communication, or you find characters are dropping during connections, you will need to upgrade your serial port UART chip to one that performs buffering of input. We suggest use of the 16550A UART chip as a replacement for the 8250 or 16450 found in most RS-232 serial boards. The use of this chip becomes even more important when more than two *WILDCAT!* nodes are configured on a single machine. This chip is inexpensive and is available from a number of computer discount houses. If you are unable to locate a source contact Mustang Tech Support at 805-873-2550 for a referral.

The Initial setup of DESQview (SETUP.BAT) allows setting performance parameters. You should experiment with these settings, but should begin with each task receiving equal time if both are operating a *WILDCAT!* node.

```
1==Advanced=Setup:=Performance=

 Task Processing Time (in Clock Ticks)
          Foreground:     3
          Background:     3

 Memory Usage (in K)
     Common Memory:       17
     DOS Buffer for EMS:   5

 Optimize communications?     (Y/N): Y
 Allow swapping of programs? (Y/N): N
 Manage printer contention?  (Y/N): N

          Next field      Tab
          Backup menu     Esc
          DONE            ↵
```

Start with 3 ticks for each node. If you are operating a single BBS in the background while using the foreground for other activities such as word processing, you then should allow the background task *more* time by a factor of about 3. The important parameters here begin with the second half of the page. Optimize communications must be set to Y in order to operate high speed modems reliably. In addition, you should load the *WILDCAT!* node that uses the *highest* baud rate first. Doing so prevents the 0-640K area of memory from becoming fragmented since communications programs are never swapped out, and guarantees the best transfer speeds. Remember that the processing power of your PC ultimately limits how many high speed communications programs may be run simultaneously without dropping characters.

Swapping of programs may be set to Y, although *WILDCAT!* should *never* be swapped out of memory. This parameter simply allows other programs this option. Printer contention should *not* be managed since DV will suspend a program that attempts to print if another is already printing. The screens that follow show the DESQview setup for each *WILDCAT!* node window. Note that we have indicated that *WILDCAT!* does not write directly to the screen since the video buffer is automatically redirected. Fine tuning DESQview parameters may be helpful in any individual installation.

```
                          Change a Program

Program Name............: WILDCAT!

Keys to Use on Open Menu: WC                          Memory Size (in K): 400

Program...: CAT.BAT

Parameters:

Directory.: C:\WC30

Options:
                 Writes text directly to screen.......: [N]
                 Displays graphics information........: [N]
                 Virtualize text/graphics (Y,N,T).....: [T]
                 Uses serial ports (Y,N,1,Z)..........: [N]
                 Requires floppy diskette.............: [N]

 Press F1 for advanced options                  Press ↵ when you are DONE
```

The Advanced options screen allows even further customization.

```
                 Change a Program Advanced Options

System Memory (in K).......:    0   Maximum Program Memory Size (in K)..:

Script Buffer Size.......:  1000   Maximum Expanded Memory Size (in K):

Text Pages: 1  Graphics Pages: 0   Initial Mode:        Interrupts: 00 to FF

Window Position:
   Maximum Height:  25       Starting Height:  25       Starting Row...:   1
   Maximum Width.:  80       Starting Width.:  80       Starting Column:   1

                            Shared Program
Pathname..:
Data......:

Close on exit (Y,N,blank)......: [N]  Uses its own colors..............: [Y]
Allow Close Window command.....: [Y]  Runs in background (Y,N,blank)...: [Y]
Uses math coprocessor..........: [N]  Keyboard conflict (0-F)..........: [0]
Share CPU when foreground......: [Y]  Share EGA when foreground/zoomed.: [Y]
Can be swapped out (Y,N,blank).: [N]  Protection level (0-3)...........: [0]

 Press F1 for standard options                  Press ↵ when you are DONE
```

Use of the fireworks screen-blanker is not recommended under DESQview. The graphics display takes a heavy toll on multitasking, and requires additional configuration for graphics.

If you insist on using fireworks, you must change the main DV setup to allow graphics, and then change each node to indicate Writes directly to screen - Y, Displays graphics - Y, and Virtualize text/graphics - Y.

Testing Multiline

We are now ready to actually set up and test the new multi-node system.

The following checklist will help ensure that all important items have been addressed:

- Single line *WILDCAT!* installed and operational on a single computer without other network workstations or DESQview
- Network software installed and operational, verified with multiple access, or DESQview installed and multiple windows activated
- Path statement placed in AUTOEXEC.BAT file for each node (or in network software search command) to include the equivalent of PATH=C:\WC30
- Unique Node IDs established for each node using the SET WCNODEID=# as an environment variable
- Bring up node one with the CAT.BAT
- Bring up second node with appropriate batch file name
- Test each fully with a remote logon at all security levels

Operational Considerations

The following are *WILDCAT!* program areas which are affected by multi-node operation and may need additional explanation.

The *WILDCAT!* multi-node program code performs both file and record locking, unlike many other BBS packages which only make use of file locking. What this means to you as a sysop is enhanced versatility and operation. For example, when operating several nodes at one time, *WILDCAT!* is able to perform sweeping changes including deleting messages in the wastebasket since any messages currently being "used" by a node are simply ignored due to the record lock. Record locking allows the PRO! series to actually perform major database updates to most items without disabling all nodes. File locking systems prohibit this type of access.

INTER-NODE CHAT—As mentioned previously, chat makes use of disk files for text entered by callers. Although direct port-to-port access could be accomplished in any one environment (LAN, DV, etc.), there is no feasible way other than disk files to support such diverse applications as true networks, slave cards, and unknown port parameters under a number of multitasking programs.

The key to having your callers make successful use of inter-node chat is clear explanation and training. Make use of the PRECHAT.BBS (.SCR), CHAT.HLP, and CHATCMD.HLP files to help your users. Since screen updates are only possible once a line has been sent, emphasize that users should be patient. If the other caller exits chat, a notice is sent to all others in chat. The same is true after paging a caller; simply wait for the notification that he has entered chat rather than issuing a constant stream of /USERS commands.

The chat file created by *WILDCAT!* is in record format, and is not easily readable without the VIEWCHAT utility. VIEWCHAT is invoked by following the command with the filename to view, such as CHAT.002 or CHAT.GRP. VIEWCHAT is not required to view the local chat capture file PAGED.CAP. The output is sent to the screen with no pauses. This allows redirection to a plain ASCII file for archival purposes with the command:

```
VIEWCHAT CHAT.001 > CHAT001.TXT
```

or page oriented screen display with:

```
VIEWCHAT CHAT.003 | MORE
```

which will pipe the output through the DOS MORE program with appropriate screen pauses. A similar command might redirect the output to the printer with:

```
VIEWCHAT CHAT.GRP > PRN
```

With proper batch file operation this utility may be included in events to print the previous night's chat files to disk or printer and erase them if desired.

***wcPRO* OPERATION**—Read the documentation for complete operational details. In multi-node situations *wcPRO* may be run without taking down active BBS nodes for most functions.

The *wcPRO* program *must* be started from the HOME directory and have a valid, *unused node ID*. The PC system used for operation can be any BBS node which has been scheduled to run *wcPRO* as an event, or a node which has been manually stopped with F10. It could also be an unused node ID on a separate workstation or in another DESQview window. Just like a local *WILDCAT!* access from a network computer, it must have a valid Node ID to function.

DUPLICATION OF A NODE ID USED BY ANOTHER *WILDCAT!* BBS NODE OR ANOTHER PRO! SERIES IN OPERATION WILL CAUSE DISASTROUS RESULTS! As an example, if you are operating 6 actual lines on the 10 node version, and have set them up as nodes 1-6, you may still run a PRO! utility function on another network PC as long as you have set an environment variable Node ID (perhaps 7). If you have already used Nodes 1-10 for real incoming lines, you *must* take down one line to operate the PRO! utility.

Each PRO! Series session should be limited to operation on only one workstation at a time if database modification is being completed. For example, unused nodes 7 & 8 may both run a session to modify message records at the same time, even while nodes 1-6 are taking calls, as long as they are reporting rather than making changes. If one is deleting messages that are over 60 days old and private, and the other is deleting all mail that is over 10 days old, there will be *too many* record locks thrown at the system at one time. If both are simply listing mail to a file for archiving, the dual processing will probably be handled adequately, but again this is dependent on the network used. If in doubt, run only one utility at one time.

EVENTS—Multi-node operation must be taken into consideration when running most events. We have discussed the PRO! series which may be run as events (for most functions) even with other nodes active. You can easily schedule node 2 for a wastebasket dump at 4am while leaving all other nodes available for calls. This is in contrast to message renumbering with *wcRENUM*, which will not operate unless all nodes have been taken down.

USER ACCESS—Only one username may have access to a system at one time. If user John Magan signs on to node 4, no one by that name may access any other node on the system. This feature prevents multiple updates of user records from different nodes to extend time or functionality.

BACKUP—This aspect of proper computer management is more important than ever in a multiline environment. The introduction of file and record locking adds an additional dimension to this activity which can cause problems. You may find that your previous backup software is unable to back up files which have locks placed on them by software, especially if you have been relying on a batch file copy process.

Other than purchasing *intelligent* backup software designed to sidestep the locks and backup all files on your particular system while the BBS is running, you may have little alternative than to implement a system-wide event which takes all nodes down with a WAITFOR! command while one node performs the necessary back up to disk or other media.

PHONE ROTATION—This may seem like a trivial topic for discussion, but there are a number of alternatives and differing opinions regarding the best implementation. We review several possibilities here with no attempt to persuade a sysop that one is better than another, but present them as alternatives for different installations.

As an example we will discuss a 10 line system. The simplest setup is a single published phone number which rotates (or hunts in telephone company parlance) down from line 1 to 2, to 3, to 10. This rotation ignores the caller's baud rate, and leaves access to faster modems to chance, unless all lines are connected to the same modem types.

Another alternative is publishing three numbers, the first rings line 1 which rotates to 2 and 3. All 3 lines are supported with a 2400 baud modem. The number for line 4 is then published as a USR 14400 HST number, and rotates through lines 5, 6, 7

and 8. The number for line 9 is also published and is supported by a Hayes Ultra 9600 V.32 which rotates to another Ultra on line 10. While this setup allows higher speed modems to selectively call the correct lines, it forces the caller to dial several numbers if they have no preference for connect rates.

Another phone company feature of interest to sysops with multiple lines is call-forward busy/no answer. This feature forwards calls that are not answered in a predetermined number of rings to a second number. Adding this feature to each line in a hunt group (to forward to the next line) is an inexpensive way to avoid caller's receiving continuous ringing when a modem or other problem keeps a line from answering the phone.

Local logins from a LAN workstation

Many companies like to use *WILDCAT!* BBS on their local area networks to provide an in-house Bulletin Board System for their staff, or to provide easy accesss for staff to a customer service BBS, from their LAN workstations.

By making use of DOS environment variables for WCPORTID and WCNODEID, local workstations can become nodes on the BBS and allow logins without typing up a serial connection or requiring login from some other LAN workstation.

The system administrator may assign a fixed WCNODEID variable to each workstation on the LAN. In cases where there are more workstations on the network than provided for in the license for your multiline *WILDCAT!* BBS, the AUTONODE utility can provide automatic assignment of node ID numbers on a next-available basis. AUTONODE is discussed in greater detail in Chapter 9 of this manual.

In order to provide local workstation access to a BBS on the LAN, the LAN administrator should install *WILDCAT!* in a network subdirectory to which all LAN workstations have access. To run *WILDCAT!* for a local session, the network user needs simply to ensure that they have a valid WCNODEID (either in the DOS environment or via AUTONODE), and that they are in the \WC30 directory when they start *WILDCAT!*.

A selection of command line switches is available for local login—these are discussed more fully at the beginning of Chapter 7.

Multiline Errors

The file and record locking code in *WILDCAT!* is very reliable and should offer trouble-free operation when set up properly. The most common error message is "Database Lock Retry # xxx" which makes 50 attempts to lock the database file needed. This error appears in the upper right corner of the screen and can pop-up at any time there is heavy BBS traffic in a multiline system. The message should disappear quickly, usually within 5 retries when the database lock is removed. If it

continues and gets to the maximum value of 50 retries, the system generates a fatal error, and places a note in the ACTIVITY.### and ERROR.LOG files. If this error occurs during program start-up it usually indicates that SHARE is not loaded and is required for operation. Immediately after 50 retries *WILDCAT!* is terminated and the errorlevel is set to 1, indicating an error. It is the responsibility of the sysop to place proper errorlevel testing in CAT.BAT to restart the program.

Another error which is very similar to the Database Lock Retry is "ReadBBSFile Lock Retry." It also appears in the upper right corner in inverse video and will retry up to 20 times. The difference is that the Database Retry Lock refers to an attempt to lock one of the three database files while the ReadBBSFile Lock Retry indicates an attempt to lock one of the other system data files, NODEINFO.DAT, or DOOR.DAT.

If your system experiences unexplained Lock Errors it may indicate that NODE ID numbers have been duplicated, and both nodes are attempting to lock a record using the same ID. Check to be sure each node has a *different* ID number assigned in a SET command. Repeated Lock failures in an otherwise normal network suggests another cause for the error.

All other network error messages are specific in nature and are usually related to program code operation. Should you experience errors, first check to determine if they are related to SHARE or improper node ID assignments. Once these have been ruled out, run the *wcREPAIR* program (with all other nodes down) and repair the database experiencing the problem. If the problem persists, print the contents of the ERROR.LOG and call our tech support department for consultation. Be prepared to review your complete system setup, node configurations, and specific errors encountered.

Chapter 9
WILDCAT! Support Programs

"No matter what business you're in, if you try to see how much you can give for a dollar instead of how little, you're bound to succeed"

(unknown)

In this Chapter...

- *wcDRAW*
  Create your own screens and menus
- DOORTEST
  Check your door operation
- HANDLES
  Check how many file handles are available
- MAKEQUES
  Generate questionnaires
- TIMEOUT
  Watch for caller time expiration in external processes
- WAIT! & WAITFOR!
  Pause in a batch file
- *wcFILE*
  Import files and set up CD ROM disks with *WILDCAT!*
- *wcMODEM*
  Set modem NRAM and test your modem
- *wcREPAIR*
  Repair damaged message, file and user databases
- *wcRENUM*
  Renumber message databases

Some of these support programs for *WILDCAT!* are menu driven with full screen displays while others are command line programs with little screen feedback. All menu driven programs have mouse support which can be disabled if desired with the command line /K (kill mouse). They also support auto-color detection code to determine whether color or monochrome should be displayed. Since this code can be fooled by some video display cards, the command line switches /C to force color and /M to force monochrome are available.

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wcDRAW

wcDRAW is a menu-driven utility to create, edit and manage the various display files, menus, bulletins and help files associated with a *WILDCAT!* BBS. It fully supports the "@" codes for color setting and user and system variables in *WILDCAT!* v3 and above. For most sysops *wcDRAW* does away with the need for an ANSI color editor and offers additional file management features not found in any other program.

General information

Although *wcDRAW* is a color editor that creates files with "@ color codes" specific to *WILDCAT!*, it offers many additional features. They include:

- Uses keyboard & mouse.
- Reads *WILDCAT!* configuration and conference definition files.
- Locates display, menu, bulletin & help files for each conference.
- Files are selectable from a pick-list of every supported *WILDCAT!* filename.
- Each filename is displayed with a description of its function.
- Imports and converts ANSI, old *WILDCAT!* control system codes and current @ codes.
- Supports block copy, move, fill and stamp.
- Contains a complete @ code table and extended ASCII table.
- Supports line drawing, including selectable line types.
- ANSI cursor position codes supported for drop-in of variable-length text.
- Simulation mode for previewing results with variable screen length.
- Editing supports single screens or multiple screens such as bulletin files.

Installation

Copy WCDRAW.EXE and the data file WCDRAW.DAT to your *WILDCAT!* "home" directory. The home directory is the one that contains MAKEWILD.EXE and is where the *WILDCAT!* program is started. *wcDRAW* must be in this directory in order to operate properly since it reads information from the MAKEWILD configuration files.

Before starting the program please take a minute to review the following brief instructions on the editor and selection lists used in *wcDRAW*.

Editor conventions

wcDRAW uses standard screen, keyboard and mouse conventions throughout the program. Pick-lists are used extensively to allow selection of an item from a list of multiple items. All pick-lists allow you to move the highlight bar with the cursor keys, or with the mouse by clicking on the item with the left mouse button. Selecting an item with the keyboard is done by pressing [ENTER] and with the mouse by double-clicking. Pick-lists often contain more items than can be displayed in a single window, and may have a scrollbar on the right side. Clicking on the scrollbar or its end points moves the highlight bar to other items. Keyboard users can jump to any item by typing in the first few characters, which causes the highlight bar to move to the item entered.

The editor STATUS LINE in *wcDRAW* provides feedback on a number of items:

```
Color  * 1:2        Mode: Text                File: F:\PRIVATE\DISP\BIRTHDAY.BBS
```

Color ..... The active Color is the color that will be used for new text, paint and fill operations. It is displayed in color.

* ..... The presence of an asterisk (*) between the color and position indicates the file has been edited since loaded into memory.

1:2 ..... The cursor location is given in the format line:column (or row:column)

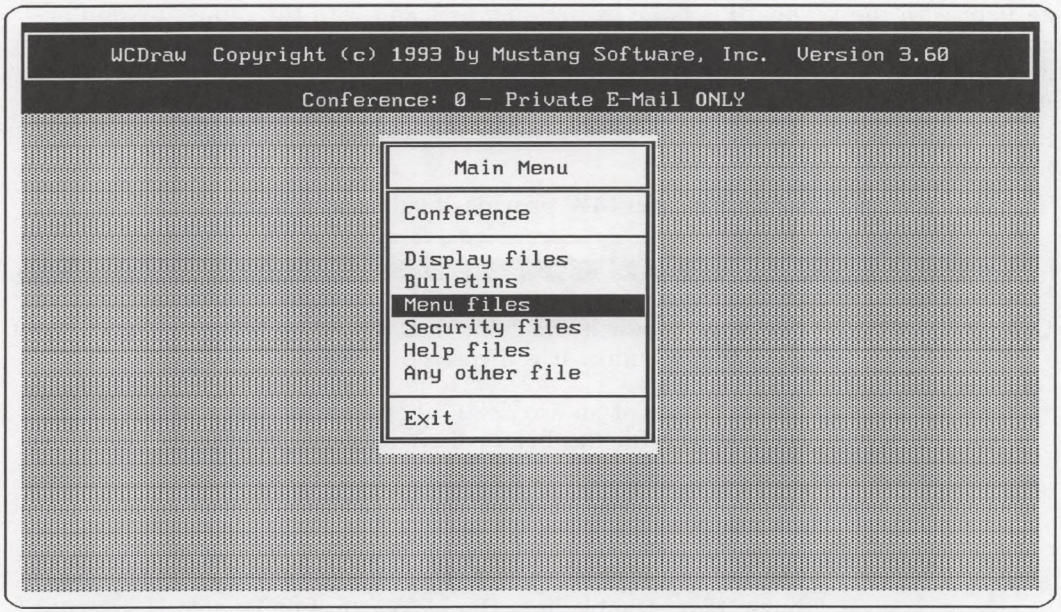
Mode ..... The mode can be Text, Selecting Block, Paste Block, Position, Single Line, Double line, Double Vertical or Double Horizontal.

By default the editor INSERTS text, but may be changed to OVERTYPE by pressing the [INS] key. The current status is indicated by the height of the cursor. A tall cursor indicates INSERT operation while a flat cursor indicates OVERTYPE operation.

File ..... The full drive, path and filespec of the file in the editor.

Starting *wcDRAW*

Begin using *wcDRAW* by changing to your *WILDCAT!* home directory and entering WCDRAW at the DOS prompt. The main menu (similar to the one below) will appear on screen:



This menu is used to begin all editing sessions. To exit the program select the Exit choice by moving the highlight bar with the cursor keys and pressing ENTER. You may also select a menu choice using the mouse by single-clicking on an already highlighted choice or double clicking on an un-highlighted choice.

The balance of this guide tells you how to accomplish specific tasks using *wcDRAW*. It is organized into sections based on what you want to do in the editor. We recommend that you learn the program by reading each section as needed, starting with the first, SELECTING FILES. As you have need for other program functions you can read additional sections and learn new features.

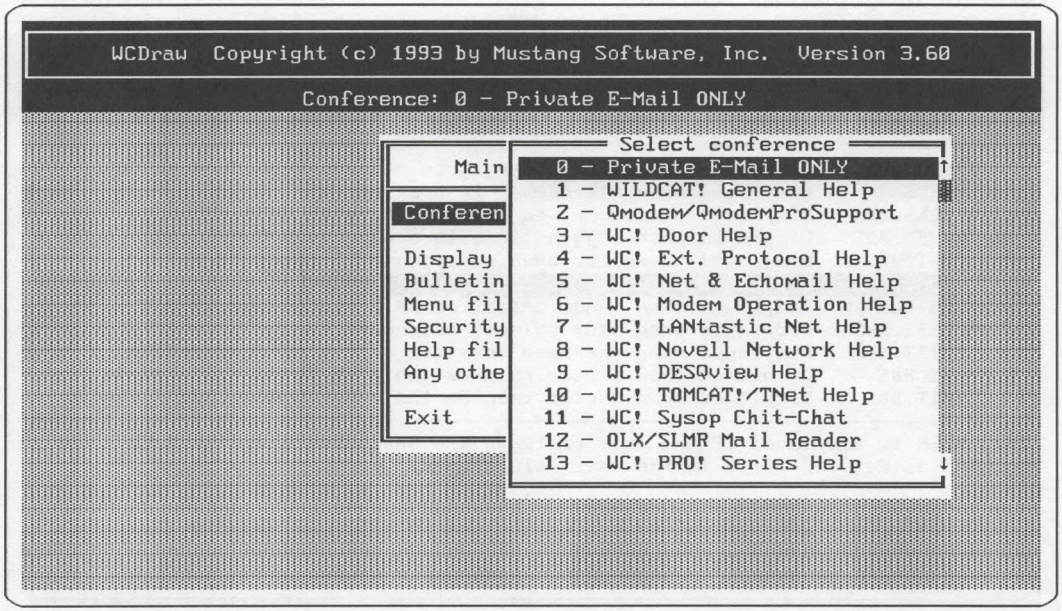
The F1 key is used to get context-sensitive help at any location in the program.

ENJOY *wcDRAW*!

Selecting files

In order to edit or create files you first must select the CONFERENCE menu choice to indicate which set of files you are interested in editing. Remember that each conference in *WILDCAT!* can have different file paths for each type of file.

The CONFERENCE selection displays a pick-list window that allows you to select the conference desired:



Select the desired conference from the list and you are returned to the main menu. Note that the selected conference is displayed just above the menu, below the title banner.

Once you have selected a conference you need to pick a type of file to edit or create. Select one of the menu choices for DISPLAY, BULLETIN, MENU or HELP files:

Depending on which type of files are chosen a different selection screen is presented.

Display files

Let's assume you pick Display files. The file selection menu is displayed allowing you to pick from any of the display files available within *WILDCAT!*. Each file is listed with a description of its operation in a smaller window at the bottom of the screen. To the left of each filename you may see an asterisk which indicates that the file exists in the directory, or a musical note indicating that the optional .SCR version exists. Any filenames without an asterisk or musical note are not present on your system for the conference selected.

```
WCDraw  Copyright (c) 1993 by Mustang Software, Inc.  Version 3.60

                Conference: 0 - Private E-Mail ONLY
                          Display files
 AFTERDOS.BBS   Displayed to caller after sysop returns from drop to DOS
 ALT*.BBS       Displayed when Alt+Number is pressed
*BADFILES.BBS   Displayed on attempt to upload a file in BADFILES.LST
*BADNAMES.BBS   Displayed when logging in with a name in BADNAMES.LST
*BEGCHAT.BBS    Displayed to caller when sysop enters chat with F6
♫*BIRTHDAY.BBS  Displayed on user's birthday
*CLOSED.BBS     Displayed when a new caller calls a Closed system
*COMMENTS.BBS   Displayed when user selects [C]omment to sysop
 CONFLIST.BBS   Displayed when the user asks for a list of conferences
*DLIMIT.BBS     Displayed when a user reaches their daily download limit
 DKLIMIT.BBS    Displayed when a user reaches their daily download K limit

This file is displayed if the user calls on the anniversary of the date
entered as date of birth in the user file record.
```

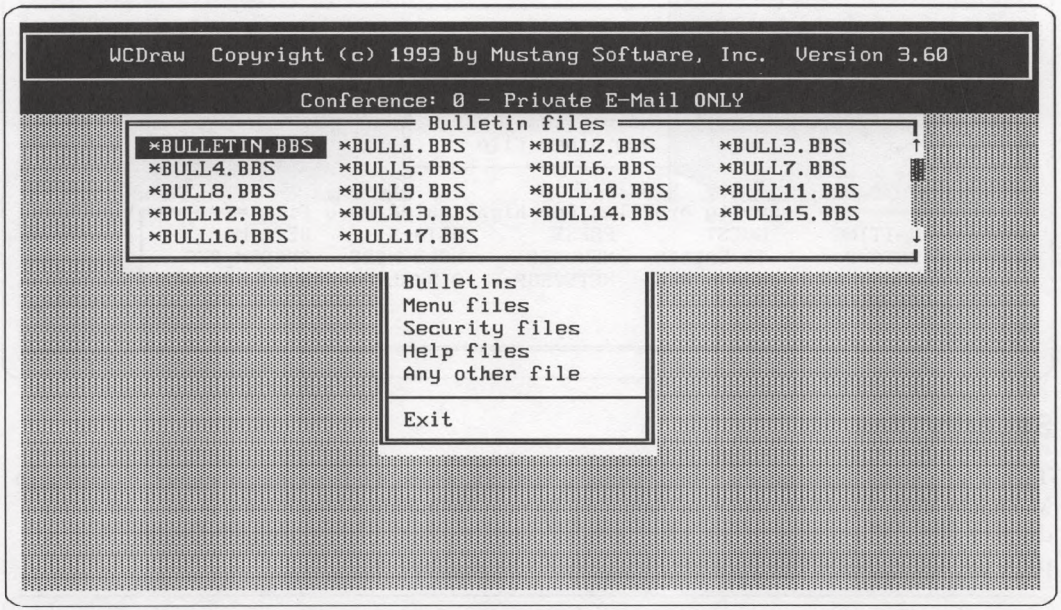
Before selecting a file to edit, let's review the selection screens for the other file types, BULLETINS, MENU FILES and HELP FILES.

Help files

The file selection screen for the HELP FILES is very similar to the DISPLAY FILES screen. Each file is listed with a description of its use in the lower section of the window.

Bulletin files

The file selection menu is displayed, but the pick-list only includes the bulletins you have indicated are available in the conference selected. If you have indicated that there can be 17 bulletins, the filenames for BULL1.BBS through BULL17.BBS will be listed. Note that filenames will be listed even for bulletins that do not exist (but no * will be displayed):



Menu files

The file selection screen for MENU FILES also has a pick-list, but provides additional information. Since each menu file is assigned to specific security profile names, a second window indicates which security profiles are active for each file. The security profile window is updated as the highlight bar is moved to different menu filenames.

```
WCDraw  Copyright (c) 1993 by Mustang Software, Inc.  Version 3.60
Conference: 0 - Private E-Mail ONLY
Menu files
*MAIN5.BBS   *MSG5.BBS   *FILE5.BBS   SYSOP5.BBS
*MAIN6.BBS   *MSG6.BBS   *FILE6.BBS   SYSOP6.BBS
*MAIN9.BBS   *MSG9.BBS   *FILE9.BBS   *SYSOP9.BBS

Display files
Bulletins
Menu files
Security files
Help files
Any other file

Exit

Security profiles for highlighted menu file
WAITING     GUEST       PRESS       BETA-S      BETA-M
BETA-P      TD-CALLER   NEWUSER     HOLD-HERE   QMODEM_REG
QWAITING    WCAT!_REG   NETSYSOP    OLX/SLMR    ECHO_OP
DEVELOPER
```

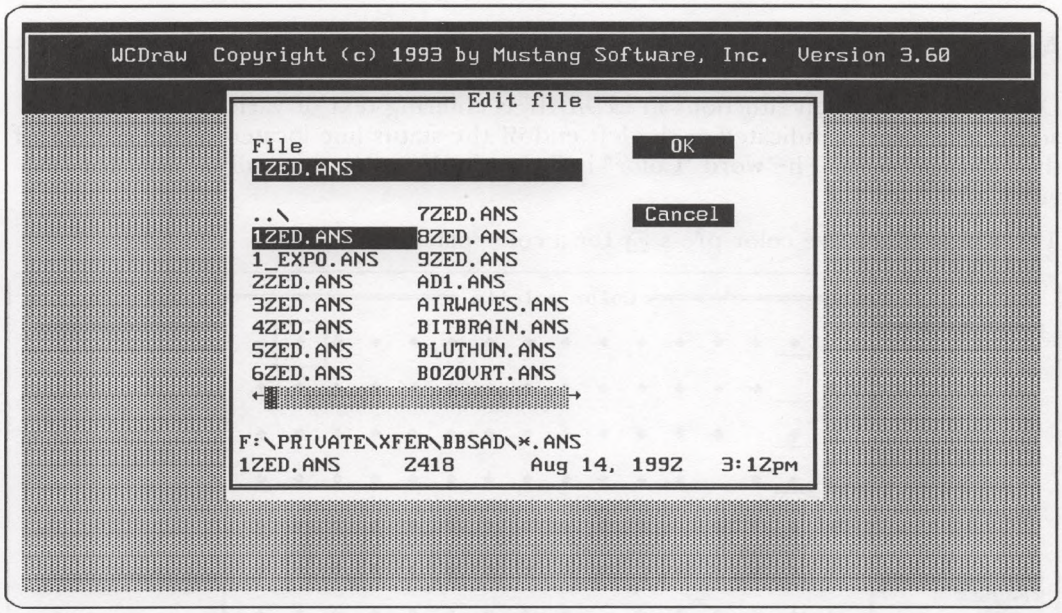
Security files

These are the files that are displayed to specific security profiles, and are defined in MAKEWILD. Each security profile can have a filename assigned to it as a security display file. When this menu choice is selected each profile name is displayed in a pick-list along with the security display file associated with it:

```
Conference: 0 - Private E-Mail ONLY
Security files
GUEST        n/a
OLX/SLMR     n/a
PRESS        n/a
QM-BETA      *QMBETA.BBS
QMODEM_REG   *QMODEM.BBS
QWAITING     *QWAITING.BBS
STAFF        *QMBETA.BBS
TD-CALLER    *TDCALLER.BBS
WAITING      *WAITING.BBS
```

Any other file

Selecting this option presents a pick-list of files in the current directory. It also allows you to change to other directories and load files for editing. You can move to any desired file by typing the first few letters of the desired filename.



Editing files

The editing process is the same regardless of which type of file is being edited. DISPLAY FILES, BULLETINS, MENU FILES and HELP FILES are all treated the same in the editor.

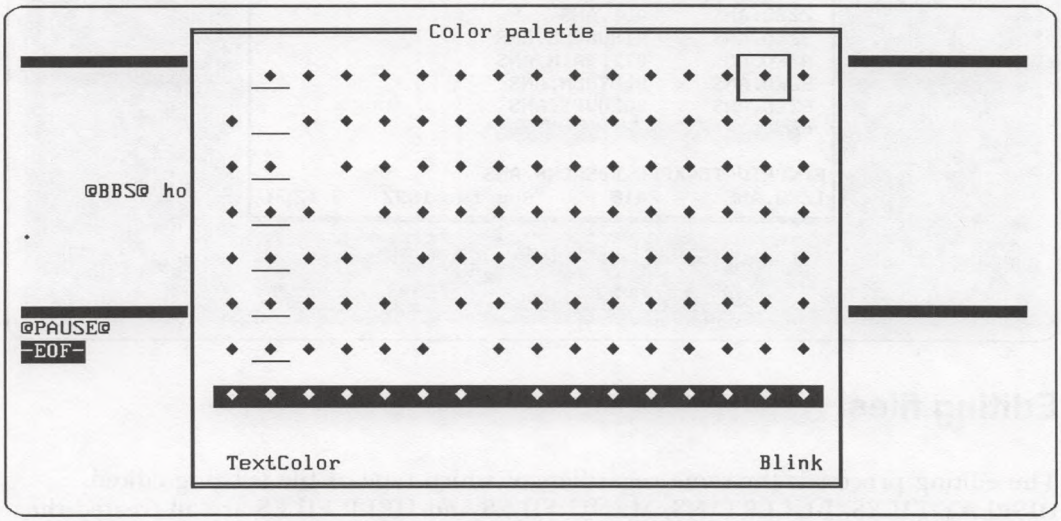
Although *wcDRAW* can edit both .BBS and .SCR versions of files, the default is to edit the file with the .BBS extension. Highlighting a file and pressing ENTER places the .BBS file in the editor. In order to select a .SCR file you highlight the filename desired and press [ALT] [A] (for ANSI) to select the .SCR file. Remember that the .SCR versions of Help files don't use the .SCR extension, but use a "C" after the main filename, i.e., FMAINT.HLP becomes FMAINTC.HLP. See *Chapter 5 — Operation and Customization* for full filename details and a review of when it is necessary to use .SCR files in addition to .BBS files.

After selecting a file for editing the contents of the file (if any) is placed in the editor. The end of the file is indicated by a non-erasable marker for End Of File, and is displayed as -EOF-, in a red background color on color monitors. This symbol indicates that no additional text or spaces are present to the right of or below the symbol.

Adding/Changing color

Of the most common functions in *wcDRAW* is entering text of various colors. The active text color is indicated at the left end of the status line located at the bottom of the editing screen. The word "Color" is shown in the color that will be used for text entry and color fill.

To change the active color press F2 for a color palette window:



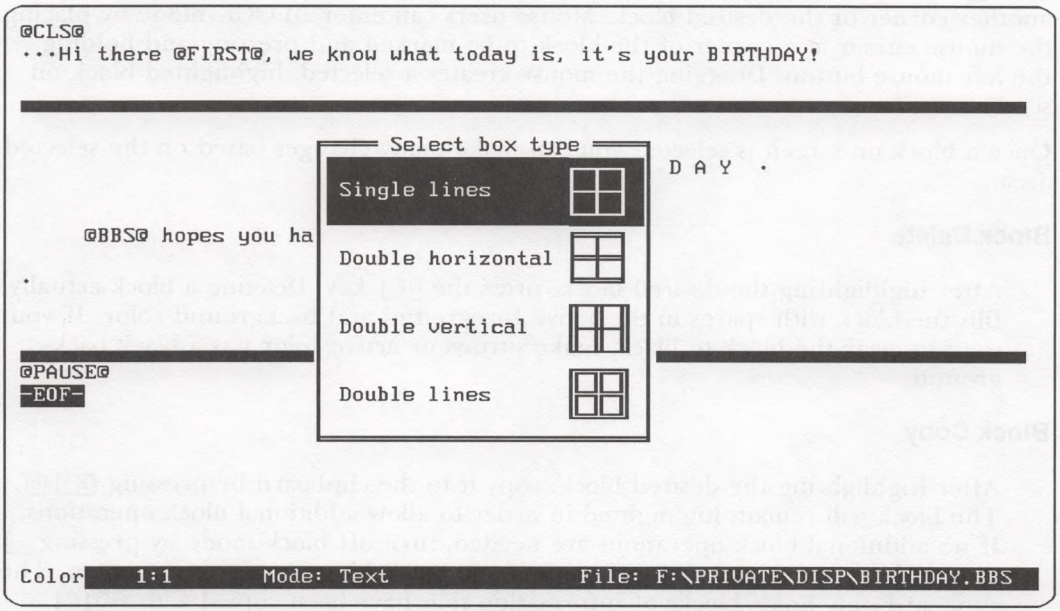
The cursor keys or mouse can be used to move the color selection box around the palette as desired. The current color can be set to blink by pressing B or clicking on the Blink field in the palette display. The active color is shown in the lower left corner of the palette window in the words "TextColor".

Once the desired color is selected, press ENTER or double-click to exit the palette and save your choice. Once a color is selected it is used for all text entry and paint commands.

An alternative method of changing the active color allows you to change it to a color already present on the editing screen. By placing the cursor under a character of the desired color, you can make it the active color by pressing ALT U (for Use color).

Drawing boxes

Creating fancy box menus or display files is easy with *wcDRAW*. Line drawing or box drawing can make use of a single line, double line or a combination of both. The choice of line type must be made before beginning to draw by pressing [ALT] [F5]. The choices are presented as single-line, double-line, double-vertical (with single-horizontal) or double-horizontal (with single vertical):



Once the line type is selected, drawing is done by changing the operational "MODE" from "Text" to the selected line mode with the [F5] key. [F5] is a toggle that changes back and forth between modes. Note that unless you are using a mouse, don't change from Text to Line mode until you have placed your cursor in the position desired to begin drawing! Mouse users can move the current cursor position at any time during line drawing.

The active mode is indicated on the status line located at the bottom of the screen. Pressing [F5] changes the mode indicator and you can begin drawing using the cursor keys.

Intersecting lines are correctly drawn automatically, even when crossing lines previously drawn on the screen.

To exit Line drawing mode you must press the [F5] key a second time.

Block operations

Many editing functions require moving, deleting or copying blocks of text or screen designs. The F3 key in *wcDRAW* is used to change from TEXT mode to BLOCK mode. The active mode is shown on the status line at the bottom of the editing screen.

Position the cursor at a corner of the block to be selected and turn on BLOCK mode with F3. After BLOCK mode has been turned on, use the cursor keys to move to another corner of the desired block. Mouse users can enter BLOCK mode by placing the mouse cursor at a corner of the block to be marked and pressing and holding the left mouse button. Dragging the mouse creates a selected, highlighted block on screen.

Once a block on screen is selected you can make many changes based on the selected area.

Block Delete

After highlighting the desired block, press the DEL key. Deleting a block actually fills the block with spaces in the active foreground and background color. If you want to clear the block to black, make sure your active color has a black background.

Block Copy

After highlighting the desired block, copy it to the clipboard by pressing ALT C. The block will remain highlighted in order to allow additional block operations. If no additional block operations are needed, turn off block mode by pressing F3 again. Mouse users can turn off block mode by clicking anywhere on screen. The clipboard only holds blocks of information that have been copied with ALT C, not deleted blocks of text.

Block Paste

After copying a block to the clipboard you can paste it anywhere on screen. Press ALT V to paste the block. The mode on the status line will change to PASTE BLOCK. The block appears on screen at the current cursor location and can be moved with the cursor keys for exact placement. When the block is positioned correctly press ENTER to lock it in place. Once locked the mode changes back to TEXT. The mouse can also be used to position the block after pasting it by clicking in the screen location for the upper-right corner of the block. The block can be moved several times in this manner, and is locked into place with a double-click. Should you change your mind about pasting a block you can remove it from the screen (before locking it) by pressing ESC. After locking it you must remove it manually or as another block operation.

The clipboard retains a copy of a copied block until another block is copied to the clipboard. This enables repeated placement of a block by pressing [ALT] [V] again. To view the contents of the clipboard at any time simply press [ALT] [V] to see the block on screen, and then remove it from the screen with ESC.

Block Move

This operation is done in two steps. First copy the marked block to the clipboard with [ALT] [C]. The block will remain highlighted and the program will remain in BLOCK mode. You then delete the block by pressing the [DEL] key, which also turns off block mode. Remember, deleting a block actually fills the block with spaces with the active background color.

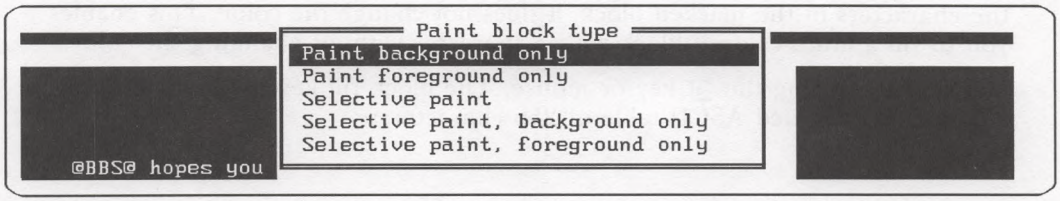
The second step in a move operation is to paste the block in its new location. Press [ALT] [V] to paste the block and move it to its new location with the cursor keys or mouse (see the paste command above). Remember to lock it in place.

Block Paint

This command allows painting a block with the current active foreground and background color. It affects ONLY the colors of the characters in the marked block, it does not change the characters themselves.

Mark a block and make sure the active color is set to the color desired for the block. If not, press [F2] to change the active color (either before or after marking the block). The block paint key is [F4] and changes all text in the block to the active color and un-marks the block.

Block Paint is also capable of restricting painting to portions of the selected block. This function, Selective painting, is activated with the [ALT] [F4] keys after marking a block. A window is displayed requesting the type of block paint desired:



Paint background only

Changes the background color of the entire block to the active background color. The active foreground color is ignored and the block foreground colors remain the same.

Paint foreground only

Changes the foreground color of the entire block to the active foreground color. The active background color is ignored and the block background colors remain the same.

Selective paint

Changes the foreground and background color, but only for certain characters, based on color. Only characters of a specified color in the block are changed. After selecting this choice, a color palette is displayed requesting the color of characters within the block that are to be changed to the active color.

Selective paint, Background only

Changes the background ONLY, and only for certain characters, based on background color. Only characters with a specified background color in the block are changed, and only their background color is altered. After selecting this choice, a color palette is displayed requesting the background color of characters within the block that are to be changed to the active background color.

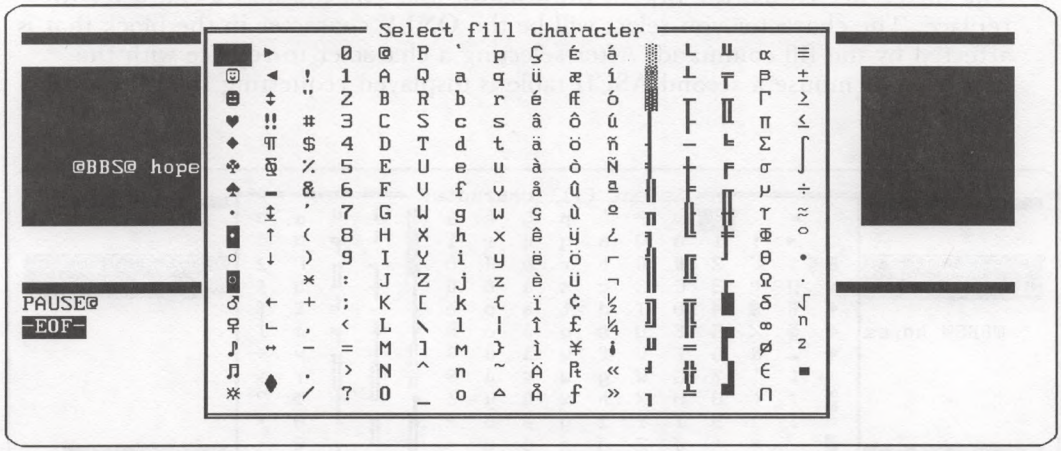
Selective paint, foreground only

Changes the foreground ONLY, and only for certain characters, based on foreground color. Only characters of a specified foreground color in the block are changed, and only their foreground color is altered. After selecting this choice, a color palette is displayed requesting the foreground color of characters within the block that are to be changed to the active foreground color.

Block Fill

This command allows changing the characters within a block. It affects ONLY the characters in the marked block, it does not change the color. This enables you to fill a multi-colored block with a character without changing the color.

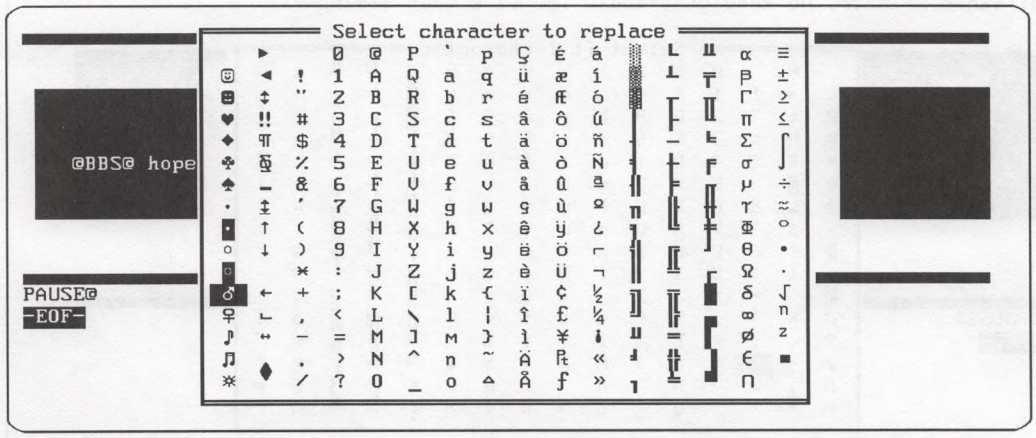
Mark a block using the F3 key or mouse. The block fill key is F7 which displays a complete extended ASCII table of 256 characters:



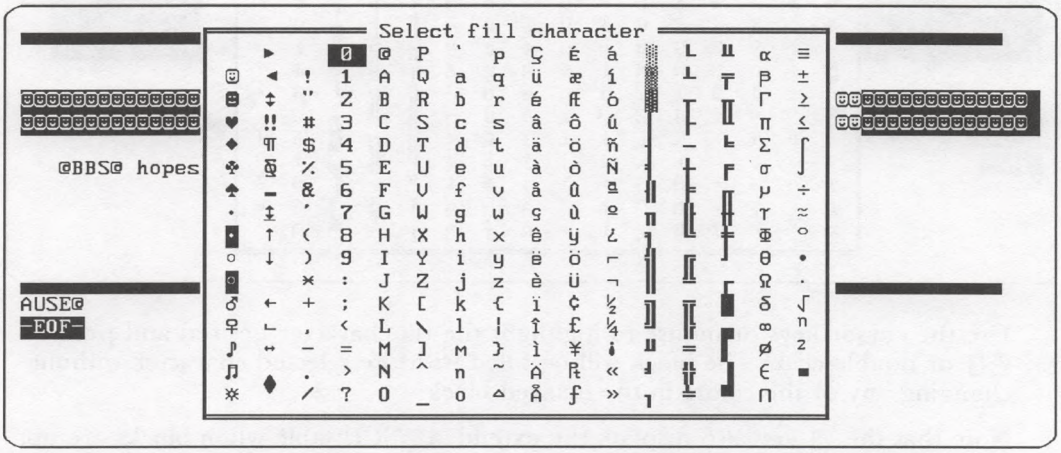
Use the cursor keys or mouse to highlight the fill character desired and press ENTER or double-click. The block will be filled with the selected character without changing any of the colors in the marked block.

Note that the F7 key also displays the extended ASCII table when blocks are not marked, and places the selected character at the cursor position.

Block Fill is also capable of replacing only certain characters within a block while leaving other characters alone. This function, Selective filling, is activated with the ALT F7 keys after marking a block. Like the standard Block Fill command, an extended ASCII table is displayed:

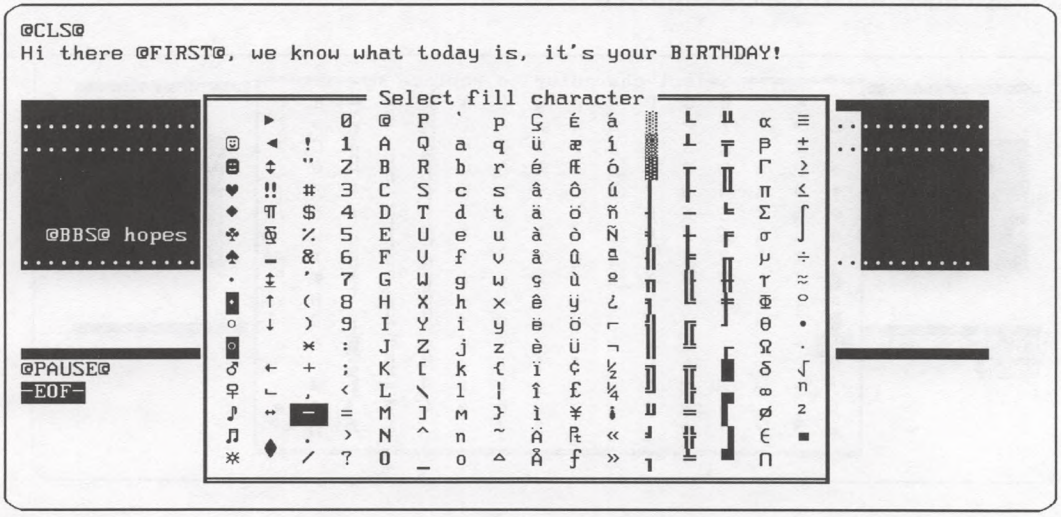


The difference is that the title of the window asks you to select a character to replace. The character you select will be the ONLY character in the block that is affected by the fill command. After selecting a character to replace with the keyboard or mouse a second ASCII table is displayed requesting the fill character desired:



The character selected here will replace the previous character everywhere it appears in the block. The color of the characters will not be changed.

For example, if we begin with a block of characters such as:



And we select the period character as the "character to replace" and the dash character as the "fill character", the resulting screen would be:

```
S@
Hi there @FIRST@, we know what today is, it's your BIRTHDAY!

                         H A P P Y   B I R T H D A Y .

  @BBS@ hopes you have a very enjoyable day-

USE@
-EOF-

Color  * 11:79     Mode: Text                File: F:\PRIVATE\DISP\BIRTHDAY.BBS
```

Adding non-keyboard characters

Placing non-keyboard characters into your documents is done by selecting the character from the extended ASCII table. As indicated previously in the section on FILL characters, the F7 key calls up the pick-list of 256 extended ASCII characters. Move around the pick-list using the cursor keys or mouse and press ENTER or double-click on your selection. The character selected is placed in your file at the cursor position. It is important to note that when Block mode is turned off the character selected from the table is placed in the cursor position, but when Block mode is turned on, the block is filled with the character selected (see the previous section on Block mode for more details).

If you find yourself repeatedly using an extended ASCII character, you may want to make use of the "NumLock key sets" feature. Pressing F6 displays the key sets available. Select the desired set using the cursor keys or mouse. Once a NUM LOCK key map is selected, you can enter a character from the key set by pressing the corresponding numeric key on the keypad as indicated in the map on screen. NUM LOCK must be on for this feature to operate. While all extended keys are not able to be mapped using NUM LOCK keys, many of the most commonly used can be selected. Note that keyboards that

have a separate numeric keypad will be able to use both cursor keys and [NUM LOCK] key map keys at the same time, but other keyboards must use the [NUM LOCK] key to toggle between modes. When a [NUM LOCK] key set is active the key mappings for the keypad are displayed on the editing screen in the lower right corner as a reminder. As your editing cursor moves to the half of the screen with the reminder box it automatically moves out of the way to the upper right corner. To cancel the use of [NUM LOCK] key sets use [F6] and select the standard numbers for the keypad.

Adding @ codes

WILDCAT! codes for system and user variables can be added to files easily. All available @ codes are listed in a window accessible from the [F8] key. Each is followed by a description of the code, and they are grouped by function.

In order to place an @ code in your screen, first position the cursor at the location you want the expanded text to appear. Press [F8] and select the desired code from the window:

```
     UPLOAD SUCCESSFUL        Thank you!

-> -> By the way @FIRST@, you have uploaded @UPS@ files totaling almost @UPK@K!
                                  Select @-code
@PAUSE@          ------------------ System variables ------------------ ↑
-EOF-            BBS          Name of BBS
                 CONF         Current conference name
                 CONFOP       Conference sysop
                 DATE         Current system date
                 LASTCALL     Time of last caller
                 NODE         Node ID number for current connection
                 NODE###      Node ID status
                 PREVON       Name of last caller
                 TCALLS       Total calls received
                 TFILE        Total number of files
                 TIME         Current system time
                 TMSG         Total number of messages
                 TUSER        Total number of users
                 SYSOP        Sysop's full name
                 VER          Wildcat version number
                 ------------------ User variables ------------------
                 ACCBAL       Account balance                        ↓

Color    1:1        Mode: Text                File: F:\PRIVATE\DISP\UPLOADOK.BBS
```

Codes are placed at the cursor position and are always inserted, regardless of the status of the editor (insert or overtype mode). When placing @ codes remember that the actual text may be much longer than the code when the code is expanded. See the explanation for the F9 SIMULATE mode to check the display and the ALT P PLACEMENT option for placing @ code information inside boxes.

Simulating display (preview mode)

wcDRAW provides a quick and easy way to look at your display files just as they appear to a caller. The SIMULATE mode is available while editing a file, and is activated with the F9 key. Simulation replaces @ codes with sample text and inserts -pause- commands in the exact same manner as *WILDCAT!*.

There are several options during simulation that can be set from the SIMULATE option menu by pressing ALT F9. The following window of choices is displayed:

```
Sample data
Set page length (now 24)
Set baud rate (now 0)
Typical sample data
Expanded sample data
```

Set page length

This choice allows you to change the page length set by the caller for the simulation. The -pause- prompt will be displayed differently based on this setting.

Typical sample data

This choice causes @ codes to be replaced by average-length text. User information is replaced with fictitious user names.

Expanded sample data

This choice causes User-specific @ codes to be replaced by text that is of the maximum length possible. It is designed to be used when placing user @ codes in text to make sure that the longest name (or other info) won't wrap past the right margin or push other text to an inappropriate position.

The above options take effect immediately and remain in effect until changed.

Cursor positioning

This ANSI operation is often called animation since it allows you to move the cursor to any location on a single screen for text placement. It is an ANSI feature and there is no equivalent @ code. For this reason its use should rightfully be limited to .SCR files, although *wcDRAW* allows you to enter it in both .BBS and .SCR files.

Cursor positioning is handy for placing variable-length text inside a box or other fixed-width enclosure. Its operation is really rather simple. The box is first drawn on the screen from top to bottom, one line at a time. Once completed, the ANSI cursor position code is sent which moves the caller's cursor to specific coordinates, such as line 5 row 15. The variable length text is then sent and overwrites the blank section in the middle of the previously drawn box. An example might be:

```
+========= Special notice!! ==========+
| Your name:  Rick Heming             |
| Your phone: 805-873-2500            |
| Your security level: FULLUSER       |
+=====================================+
```

The above example is sent to the caller by first sending the plain box and text without any @ code information:

```
+========= Special notice!! ==========+
| Your name:                          |
| Your phone:                         |
| Your security level:                |
+=====================================+
```

Then the three @ codes are sent, preceded by cursor position ANSI codes for each. To create the effect desired you first create the basic screen in *wcDRAW* as shown above. To place the @ codes you need to start with your cursor at the end of your screen which is where the ANSI cursor codes will be placed. Press [ALT] [P] to activate POSITION mode. Move the cursor using the cursor keys to the location where you want the @ code or other text to be placed:

```
+========= Special notice!! ==========+
| Your name:  _                       |
| Your phone:                         |
| Your security level:                |
+=====================================+
```

start with cursor (_) above, press [ALT] [P] and move it to the location desired.

Once you have moved the cursor to the desired location for the @ code or text, enter the code or text. You can press [F8] for a list of @ codes if desired. You will notice that the text or codes you enter are actually placed at the bottom of your file, preceded by an appropriate ANSI cursor position code:

```
+========= Special notice!! ==========+
| Your name:                           |
| Your phone:                          |
| Your security level:                 |
+======================================+

←[15;23H@USER@
```

this portion is the ANSI code

When the file is displayed it will have the user's name in the correct location.

When creating files with cursor position codes you must remember that all modem data is sent to the caller sequentially, from the top left of the file to the bottom right, line-by-line. If you send a cursor locate code followed by a @ code, then the @ code information is displayed somewhere other than the end of the file on the caller's screen. Meanwhile, your file continues to send any additional characters, and they will be displayed immediately after the @ code text. If you want them displayed elsewhere you need to put in another cursor position code. This applies even if you simply want to have the cursor return to the end of the file. For example, the following is probably not what you want to do:

```
+========= Special notice!! ==========+
| Your name:                           |
| Your phone:                          |
| Your security level:                 |
+======================================+
←[15;23H@USER@@PAUSE@
```

In the above INCORRECT example, the @PAUSE@ code will not appear at the end of the file, but instead will show up as follows:

```
+========= Special notice!! ==========+
| Your name:  Rick Heming-Pause- [C]ontinue, [N]onstop,
| Your phone:                          |
| Your security level:                 |
+======================================+
```

If you use cursor positioning, remember to end the file with a cursor position code that places the cursor where you want it, usually at the end of the file on the caller's end. To place a final cursor position code, begin with the cursor at the end of any previous cursor locate codes. Press [ALT] [P] to change to Position mode and move the

cursor back to the location you want to have the caller's cursor stop. Press [ALT] [P] again and the position will be recorded. As an example, our incorrect file above should read:

```
+========= Special notice!! ==========+
| Your name:                           |
| Your phone:                          |
| Your security level:                 |
+======================================+
←[15;23H@USER@←[19;10H@PAUSE@
```

This corrected file displays as:

```
+========= Special notice!! ==========+
| Your name:  Rick Heming              |
| Your phone:                          |
| Your security level:                 |
+======================================+
 -Pause- [C]ontinue, [N]onstop, [S]top? [C]
```

Our final example shows the entire file necessary to display the full file used in our example, along with a -pause- prompt at the end:

```
+========= Special notice!! ==========+
| Your name:                           |
| Your phone:                          |
| Your security level:                 |
+======================================+
←[15;23H@USER@←[16;23H@PHONE@←[17;23H@SEC@←[@19;10H@PAUSE@
```

Here's what each sequence of codes does:

←[15;23H ..... moves to line 15, col 23

@USER@ ..... prints name

←[16;23H ..... moves to line 16, col 23

@PHONE@ ..... prints phone number

←[17;23H ..... moves to line 17, col 23

@SEC@ ..... prints callers security profile

←[19;10H ..... moves to line 19, col 10

@PAUSE@ ..... prints -Pause- prompt

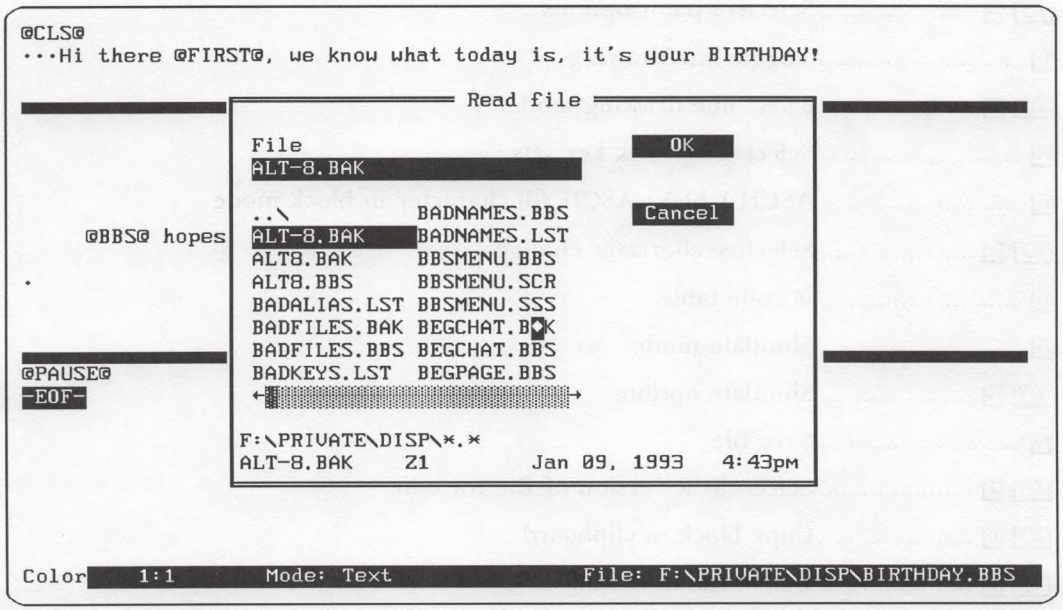
The final display to the caller is:

```
+========= Special notice!! ==========+
| Your name:  Rick Heming              |
| Your phone: 805-873-2500             |
| Your security level: FULLUSER        |
+======================================+
-Pause- [C]ontinue, [N]onstop, [S]top? [C]
```

Importing text

Text created outside of *wcDRAW* can be imported into the editor easily. Only ASCII or ANSI text should be imported. ANSI color is converted to @ color codes during import. Lines are not word-wrapped during import and are truncated at 255 characters.

To import text press [ALT] [R] and select the file from the pick-list presented.



The list presents files in the current directory sorted by name. Type the first few letters of the name of a file desired to move to the correct section of the pick-list. To change drives or directories enter the desired file specification in the Files field at the top of the dialog box.

Deleting files

Deleting files can be done from the editor or from the file pick-list. From the editor press [ALT] [D]. A confirmation for deletion will be requested. From a file pick-list press the Del key. If both a .BBS and .SCR file exist you will be further prompted as to which file you want to delete.

Command reference

[F1] ..... Help (context-sensitive)

[F2] ..... Select active color

[F3] ..... Mark block for Paint or Fill

[F4] ..... Paint block with active color

[ALT] [F4] ..... Selective paint options

[F5] ..... Toggle line drawing

[ALT] [F5] ..... Select line drawing mode

[F6] ..... Select NumLock key sets

[F7] ..... ASCII table\; ASCII fill character in block mode

[ALT] [F7] ..... Selective character change

[F8] ..... @ code table

[F9] ..... Simulate mode

[ALT] [F9] ..... Simulate options

[F10] ..... Save file

[ALT] [A] ..... Select .SCR version of file for edit

[ALT] [C] ..... Copy block to clipboard

[ALT] [D] ..... Delete file in editor

[ALT] [R] ..... Read file into editor

[ALT] [U] ..... Use current color for active color

[ALT] [V] ..... Paste clipboard to screen for positioning

AUTONODE

This program is used only with multiline installations that want to implement the autonode ID assignment feature. In order to operate correctly, the MAKEWILD setting for autonode assignment must be set to Yes.

AUTONODE performs two functions. It identifies which nodes are available for auto-assignment and provides a method to reset nodes when they are incorrectly set to "in use."

It is often convenient in a large multiline system to limit autonode ID assignment to only a portion of the available nodes. Doing so guarantees specific node ID assignments for dial-in lines while allowing local network users the freedom of auto-assignment. Further, it prevents dial-in lines from becoming locked due to unavailability of a node ID should a local user continuously exit improperly, tying up a node ID until explicitly released.

AUTONODE must be run from the *WILDCAT!* home directory where the configuration files are located. A single screen displays all available nodes depending on the program level purchased. Two functions are available once a node is selected with the highlight bar.

A - Auto-assign—Pressing [A] activates a toggle that assigns the node as *Auto-Node* or *normal* (blank). You may make as many nodes as desired available for autonode assignment.

U - Use flag—Pressing [U] activates a toggle that changes a node from *In Use* to not in use (blank). This toggle is available in the event a local user exits *WILDCAT!* improperly (by rebooting or breaking out of the program). The "in use" flag should never be set for a node unless someone is actually connected. If local users are advised that there are no nodes available for auto-assignment either all nodes are in use, or some are incorrectly set to "in use". This option is used to remove the incorrect "in use" flags.

Once a set of node IDs is made available for auto-assignment, no additional changes are needed. Every time a *WILDCAT!* starts, the next available autonode is assigned. When *WILDCAT!* is stopped the node is released to be used by the next PC starting the program.

DOORTEST

DOORTEST is a small program to test the operation of doors on your system. It operates much like other door programs in that it reads your system parameters from an ASCII configuration file DOORTEST.CFG. Full instructions for DOORTEST are given in the section on DOORS in the *Features in Depth* section of the manual.

HANDLES

This program can be run at any time to tell you the number of DOS file handles available to *WILDCAT!*. For proper operation it should indicate *seventeen* available handles as a minimum. It properly recognizes extended file handle allocations and is used by our tech support department for testing.

MAKEQUES

Makeques is used to create questionnaire files in *WILDCAT!* readable format and is the only way to make these files.

The easiest method of creating a questionnaire is to *first* write down all the questions you want to ask. Put them in groups according to "branches" that are to be answered together, i.e., questions for sysops, questions for general users, questions *if* an order is to be taken, questions *if* a caller wants to register, etc.

Branching is allowed both forward and backward. Do not attempt to branch to a nonexistent question! Plan things out ahead of time! Up to 99 questions can be entered per questionnaire, and any question that branches to question 99 indicates a termination point. Multiple branches to question 99 are allowed for terminating the questionnaire from several branch points.

After creating your written questionnaire you are ready to begin the MAKEQUES program. You should start from the *WILDCAT!* HOME directory, by default C:\WC30. After typing MAKEQUES the opening screen is displayed with a blank set of questions. The menu at the bottom of the screen offers several choices for creation and maintenance.

F3-**Load** —The first option we review is F3-Load to read a previously created questionnaire from disk. In order to explain questionnaire creation completely we will review the structure of the new user questionnaire distributed with *WILDCAT!*, QUESNEW.DAT during this discussion. Use F3 - Load and select QUESNEW.DAT now. The following sample screen shows the main screen with a questionnaire already loaded in memory.

```
MakeQues Copyright (c) 1988,92 Mustang Software Inc. Version 3.50.

 #                    Prompt                                  Type     Next
 ___ ____________________________________________________ ____________ ____
  1 Welcome to the Mustang Software WILDCAT! HQ BBS.      None          2 ↑
  2 For our BBS records we would like to get some addi    None          3
  3 Please answer as correctly as possible to enable u    None          4
  4 you the best service and support possible.            None          5
  5                                                       None          6
  6 For later verification, please enter your birthdat    Date          7
  7 What is the City and State (or Country) you're cal    Text          8
  8 Do you want Color Menus and Prompts?                  Yes/No        9
  9 We require a VOICE phone number in order to mainta    None         10
 10 access to this system.  This field is required.       Phone        11
 11 How did you obtain the phone number to this BBS?      Choice       «» ↓

Loaded: C:\WC30\QUES\QUESNEW.DAT

        F4-New          F3-Load          INS-Insert        F5-Test
       ESC-Exit         F2-Save          DEL-Delete        F9-Print
```

F4 **New** is used to load a different questionnaire when one is already on screen.

INS **Insert Line** and DEL **Delete Line** are used to add and remove lines from your questionnaire. Removing or adding lines automatically adjusts the branch field question numbers for all relocated questions (more on this later).

F5 **Test** is used to run the questionnaire to make sure your questions branch and sequence properly. No data is saved to disk when test is used.

F9 **Print** creates a printed copy of your questions and all supporting information.

Questions are edited by moving the selection bar over the item and pressing ENTER. A pop-up window then displays the question text and a number of additional options.

```
MakeQues Copyright (c) 1988,92 Mustang Software Inc. Version 3.50.

#                    Prompt                                  Type    Next

                              PROMPT
Prompt      What is the City and State (or Country) you're calling fr
                              Field
Type        Text          Required Y
Length      27
Branch      8
                              Options
User field  From
Security
Transfer
Expire      0
                          Instructions
                      Enter question prompt

      F4-New          F3-Load          INS-Insert        F5-Test
     ESC-Exit         F2-Save          DEL-Delete        F9-Print
```

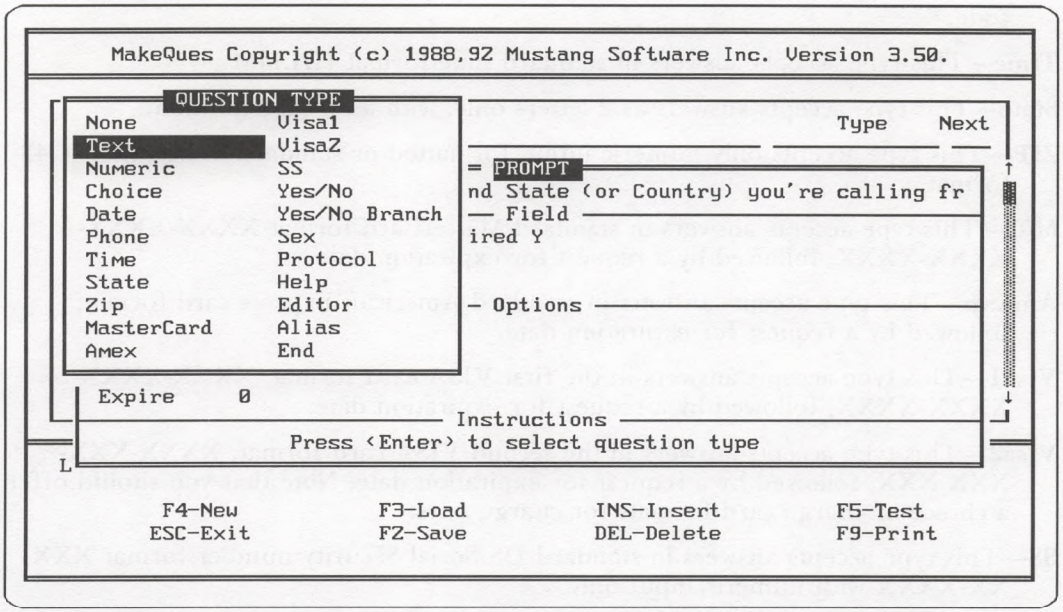
Prompt

The text you want displayed to the caller is entered in the "Prompt" field. Note that only the first 60 characters are displayed, but the editor scrolls left and right as needed to accept up to 75 characters. Cursor movement within a field makes use of the standard *WILDCAT!* editing keys. Movement from field to field makes use of the ⊟ (tab) key.

A text file can also be displayed in place of the question prompt by entering the filename and full path preceded by a slash. For example, if you want to display the file CREDIT.TXT at the text prompt for a question you replace the question prompt line with:

```
/C:\WC30\QUES\CREDIT.TXT
```

The entire text of the file is displayed followed by the correct question type response, or the next question if the question is simply a note.



Type

The "Type" field lets you choose which type of question will be asked. Pressing ENTER in the "type" field pops-up a window with the available choices:

None (comment)—This type is not really a question since it displays the prompt text to the caller, but does not request a response. It is used to preface questions with additional text or to insert comments to be displayed to the caller between questions.

Text—All alphanumeric input and punctuation is accepted as an answer. Use this type for general responses, or perhaps a substitute for Phone or Zip codes if you need alpha input for Canadian or non-US formats.

Numeric—Numeric input only allows numbers. Use it for numeric input that is not specifically covered in the following formatted fields. It is also a good choice for non-US phone formats.

Choice—Multiple Choice input allows the caller to select a response from a list of numbered choices. The choices available are entered in the "Branch" field (discussed later) to enable different branches for different choices.

Date—This type accepts answers in standard US date format.

Phone—This type accepts answers in standard US phone format, including area code.

Time—This type accepts answers in standard time format HH:MM

State—This type accepts answers as 2 letters only, with auto-capitalization.

ZIP—This type accepts only numeric input, formatted or standard 9-digit (ZIP + 4) format.

M/C—This type accepts answers in standard MasterCard format XXXX-XXXX-XXXX-XXXX, followed by a request for expiration date.

AmExp—This type accepts answers in standard American Express card format, followed by a request for expiration date.

Visa1—This type accepts answers in the first VISA card format, XXXX-XXXX-XXXX-XXXX, followed by a request for expiration date.

Visa2—This type accepts answers in the second VISA card format, XXXX-XXX-XXX-XXX, followed by a request for expiration date. Note that you should offer a choice of charge card formats for charge sales.

SS—This type accepts answers in standard US Social Security number format XXX-XX-XXXX with numeric input only.

Yes/No—This type accepts answers as Y or N, but offers no individual branching for each choice. It is designed to be used to import answers into user record fields such as Color, Erase prompt, and others.

Yes/No Branch—This type accepts answers as Y or N and offers individual branching for each choice. It may also be used to import answers into the user record fields, and allows branching to different questions for the Y and N response.

Sex—This type accepts answers of Male, Female or Not disclosed. The answer choices are formatted specifically for import to the user record.

Protocol—This type accepts answers formatted specifically to match the internal file transfer protocols offered by *WILDCAT!*. The question prompt is immediately followed by a display of the available transfer protocols. It is designed for import into the user record.

Help—This type accepts answers formatted specifically to match the Help levels available within *WILDCAT!*. The question prompt is immediately followed by a display of the Help choices available. It is designed for import into the user record.

Editor—This type accepts answers formatted specifically to match the choices for editors offered by *WILDCAT!*. The question prompt is immediately followed by a display of the available editor choices, including one to select an editor for each message entered. It is designed for import into the user record.

Alias—This type accepts answers in text format but is specifically designed to import to the user record Alias field.

End—This type indicates the end of the questionnaire, and is not displayed to the caller. Make sure there are no questions after any END question.

Required

If this option is selected for any questions, the caller is required to enter an answer of some type to the question before he can continue.

Length

The length field allows control over how much text is entered in Text and Numeric type questions. It is only available for editing when Text or Numeric are selected as the question type. As an example, it is used by Mustang Software to limit the number of characters entered to 7 when asking callers to enter their *WILDCAT!* registration number, and presents the caller with 7 spaces between two brackets.

The length field is automatically adjusted for user record import items. For example, a text question asking the user to enter a password is limited to 14 characters as soon as the import function to the password user record field is enabled.

Branch

This field controls the flow of the questionnaire after the user completes the current question. It is a numeric field containing the next question. For question types with multiple answers such as Choice and Yes/No, the branch field displays a pop-up window when ENTER is pressed. The window allows entry of text for each of the choices and a branch question number for each.

User field

This field is another pop-up window that displays user record fields available for importing answers. The default is **None**, indicating that the answer to the question is not imported into the user record of the caller answering the questionnaire. If this field is set to anything but None, the answer to the question is imported into the user record field, replacing any previous entry. Depending on the question Type, various user record information can be modified.

Text type questions are able to modify the user record From field, Password field, Country field, Computer field, Address fields, City, State and ZIP fields, Comment fields and Title field.

Numeric type questions are able to modify the Lines per page field in addition to all the fields listed for text type questions.

Yes/No type questions are designed to modify the Hotkey field, Erase pause prompt field and Color enabled field, in addition to all the fields listed for text type questions (although it makes little sense to do so). Unusual modifications such as assigning the reply to a Yes/No question to an Address field are allowed in the event a sysop makes use of a field to track different information than the user record intended.

Date type questions are designed to modify the Expiration date, Birthdate and Memo date fields. It may also import to any of the fields listed for text type questions.

Protocol type questions are designed to modify the user's default transfer protocol field. It may also import to any of the fields listed for text type questions.

Help level type questions are designed to modify the user Help level. It may also import to any of the fields listed for text type questions.

Editor type questions are designed to modify the user's default message editor. It may also import to any of the fields listed for text type questions.

Alias type questions are designed to modify the user's Alias name. It may also import to any of the fields listed for text type questions. Only an Alias type question can be imported into the Alias user record field.

Security

This field allows changing a caller's security profile during a questionnaire. If a valid security profile name is entered in this field, the caller' user record will be changed when the question is answered. The change could result in an increase or decrease in access rights, depending on the caller's original level, and the level to which the change is made. This is a pop-up window item that displays a selection list of all valid security profile names.

Transfer

This field allows transferring control to another questionnaire file after the current question is answered. Enter the name of another questionnaire in the space provided, or leave it blank to disable transfer.

Expire

This field allows alteration of the expiration date by specifying how many days the user has until expiration. It allows a sysop to extend access at a specified level (using the Security field above), but to limit it to a number of days. After the number of days entered here the user's profile will change to the level assigned for the profile in use.

For example, a first time caller may be started with a profile NEWUSER, will have little access. By answering the newuser questionnaire and providing all information requested he could be changed (using the Security field) to the TEMPREG profile, with some additional access. In addition, his expiration date could be set for 15 days to give the sysop time to verify the caller information. If the caller's profile was not updated by the sysop within the 15 day period his profile would be automatically changed on his first call after the expiration date to whatever profile is assigned for the expired users in TEMPREG.

Testing & Saving

There may be no blank question numbers between the first and last question. All terminating questions should branch to question 99, and all remaining question lines after the last physical question should have question type END.

The F5 **Test** menu choice is used to verify that all branching and termination points operate correctly. This option plays back the current questionnaire just as it will be seen in *WILDCAT!*, with the exception that text files called with the / drive:path/filename statement will not display. If a question calls a second questionnaire, that questionnaire will not be executed during test mode, only when the questionnaire is executed from within *WILDCAT!*

The screen is split with the questionnaire execution in the upper window while the question options are displayed in the lower window. This allows checking the options as each question is processed. No information is written to disk during a test. Note that the "Test" function does not branch to other questionnaires.

The F2 **Save** menu choice prompts for a questionnaire name and saves the questionnaire to disk. The extension for all questionnaires is .DAT, and should not be entered. Valid questionnaire names are:

QUESNEW.DAT—This questionnaire is sent to all new callers on the first call to the system. This option is automatically implemented if a questionnaire by this name exists in the path for questionnaires for conference zero. This location is mandatory since a new user may not have access to other conferences and a static location is needed.

QUESCLOS.DAT —This questionnaire is sent to all first-time callers *if* the BBS type is set to "Closed Questionnaire" in MAKEWILD. It is sent in addition to the QUESNEW questionnaire if both exist. This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location.

QUESDATE.DAT—This questionnaire is sent based on a comparison of the date of creation of the questionnaire and the callers last call date. If the caller's last call was before the date of the questionnaire, it is sent to the caller after login. If the caller's last call is after the creation date of the questionnaire it is skipped. This type of questionnaire is useful for "one-time" answers such as a poll or survey where each user should only have one opportunity to answer. This specific questionnaire *must* be located in the questionnaire path for *conference zero*. This location is mandatory since a user returns to the last conference accessed on the previous call, and this set of files needs a static location.

QUES####.DAT—Questionnaires for presentation in the Questionnaire menu choice on the main menu are numbered from 0001 to 9999. Padding with leading zeros is required.

The [ESC] **- Exit** menu choice prompts you to save a questionnaire in memory if you have not done so already, and exits to DOS.

Remember, the question files created with MAKEQUES should be located in the path for questionnaires. The answers are placed in the same directory and are named after the questionnaire with an extension indicating the node ID number from which they were generated. For example, all answers to the new user questionnaire on node 1 are placed in QUESNEW.001, and all answers to questionnaire number 4 on node 2 are placed in QUES0004.002.

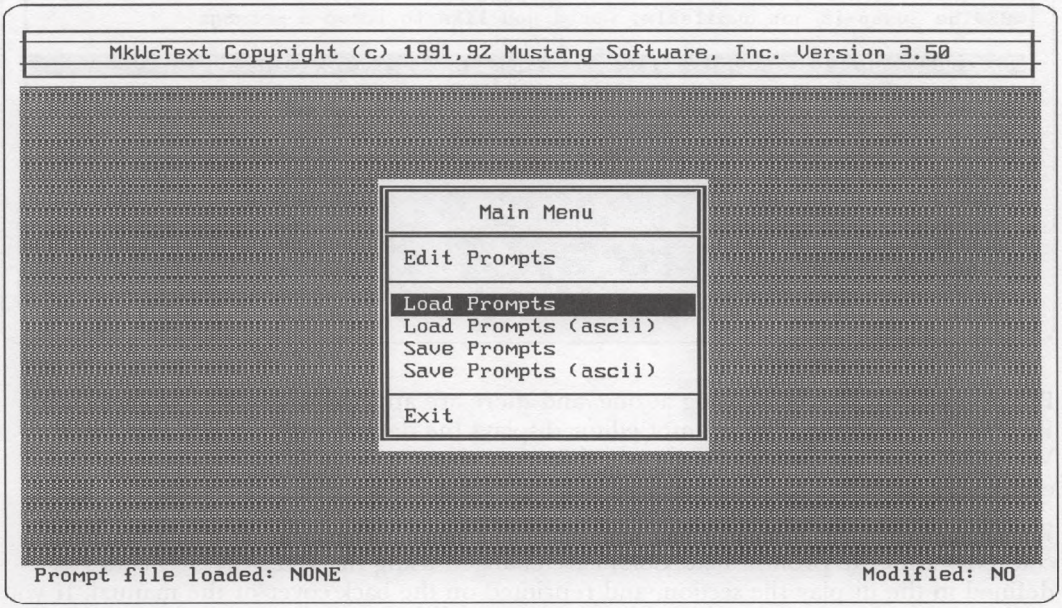
MKWCTEXT

MKWCTEXT (Make WC Text) allows total control over the text prompts and colors used in *WILDCAT!* and *Tomcat*. It allows customization of most text including use of a language other than English.

If you already know the name of the prompt file you wish to edit, you may put the name on the command line when starting MKWCTEXT. Otherwise, you may select the prompt file to edit after starting MKWCTEXT, from the Load Prompts menu.

The main menu offers choices to Load a prompt file or ASCII text, Save a prompt file or ASCII text, Edit a prompt file or Exit.

You have two choices when editing your *WILDCAT!* and *Tomcat* prompt files. The **MKWCTEXT** program allows you to edit the data file directly, or you may export the prompts into a plain ASCII file, and use a text editor to edit and save your changes, then re-import the prompts into the standard data file format. First, we will show how the prompts can be edited within MKWCTEXT.



The prompt file name read by the *WILDCAT!* program is **WCTEXT.DAT**, and the filename containing the default values distributed with your program is WCTEXT.DEF. The *Tomcat* prompt files are **TCTEXT.DAT** and TCTEXT.DEF, respectively. The .DEF file is not in a format that can be edited and is only designed to allow restoring a modified prompt back to the default value during editing.

Until a .DAT file is loaded using the **Load Prompts** command no editing can be performed. When Load Prompts is chosen with the selection bar enter the filename to edit. The extension .DAT is not required when filenames are entered for loading or saving.

Once **WCTEXT** is loaded the **Edit Prompts** choice becomes available.

```
MkWcText Copyright (c) 1991,93 Mustang Software, Inc. Version 3.60

                          EDIT PROMPTS
 Prompt #: 1
                           Default
@0E@The Sysop is not available, would you like to leave a message
                           Prompt
@0E@The Sysop is not available, would you like to leave a message
                         Instructions
 F2  - Goto              Up        - Back          Down      - Forward
 F3  - Find              PgUp      - 10 back       PgDn      - 10 forward
 F4  - Restore default   Ctrl-PgUp - First prompt   Ctrl-PgDn - Last prompt

 Prompt file loaded: WCTEXT.DAT                     Modified: NO
```

Prompts are numbered starting at one, and there are approximately 800 prompts in the *WILDCAT!* program. The prompt editor displays the default prompt as it exists in the WCTEXT.DEF file just above the edit line. Any changes desired can be made on the edit line.

WILDCAT! prompts are displayed in yellow on a black background unless otherwise colored within the prompt text. Colors are changed using the *WILDCAT!* @ codes as defined in the display file section, and reprinted on the back cover of the manual. If you want to change the color of a prompt you simply add the correct color code in front of the text. *Don't forget to change it back at the end to avoid colorizing whatever is displayed after the prompt as well.* The message text color may be changed by editing the color code of prompt number 80.

Prompt lengths are sometimes critical. The default length always results in a proper display, but longer prompts may cause words to be wrapped in rather unusual ways. If a prompt change results in a longer phrase you should check the display to determine if it is acceptable. Adding color codes does *not* increase the display size on screen, and can be done as often as desired.

F2 **Goto** prompts for a number of a prompt, and is useful for locating and re-editing a prompt once you know its number.

F3 **Find** allows you to locate all prompts containing specific text. You are prompted for the text to be located and then allowed to accept or reject each successive match. This feature is handy for locating and changing all references to a single color or word in all prompts.

F4 **Restore default** replaces the editable prompt line with the text on the default line above. Defaults are read from the WCTEXT.DEF file which is distributed with the program. This option only restores one line at a time to the default value.

ESC returns to the main menu and allows saving your revised prompt file.

When Save is selected you may enter any valid DOS filename for the file, although *WILDCAT!* will only recognize and read WCTEXT.DAT. If you make several different prompt files you may want to save them under different names and copy them to the name WCTEXT.DAT as you make use of them. Keep an unaltered copy of WCTEXT.DAT, perhaps under a different name, if you are not certain you will be happy with your changes.

MKWCTEXT also has the ability to export and import ASCII versions of text prompts. This allows editing the prompts outside of MKWCTEXT by first EXPORTING and then placing the ASCII file that is generated into a plain ASCII editor. The file format is very simple, but MUST be maintained during editing.

Each prompt is written to a separate line in the file. If there are 782 prompts in *WILDCAT!* the export file will have 782 lines. Prompts that take up more than one line within MKWCTEXT are written out as a single line with the CR/LF (carriage return/line feed) combination shown in the ASCII file by the four text characters

```
^M^J
```

Prompt lines in the ASCII file will often exceed the width of a screen and must not be word-wrapped to the next line while editing.

After editing is complete the file must remain at the same number of lines. When editing is complete, the file may be IMPORTED using MKWCTEXT.

If you damage or overwrite your original WCTEXT.DAT file you can restore it by copying the original file from your distribution disk.

TIMEOUT

TIMEOUT is a terminate and stay resident (TSR) command line utility used to ensure that callers do not remain online in an external protocol beyond their allowable time. The syntax for TIMEOUT is:

```
TIMEOUT [-M#] [-B#] [-U] [-?]
```

-M# is the letter M followed immediately by the number of minutes until a forced disconnect.

-B# is the letter B immediately followed by the communications port base address. This number must be entered in hex with the hex identifier $ as the first character. The default (if not entered) is $03F8 indicating COM1. The common value for COM2 is $02F8, for COM3 it is $03E8 and for COM4 is $02E8.

-U unloads the TIMEOUT TSR from memory, and *must* be included at the end of any batch file that runs TIMEOUT. If TIMEOUT is not unloaded before returning to the BBS, memory will become corrupted and the system will come to a screeching halt. **Don't overlook this!**

TIMEOUT operates by monitoring the clock at long intervals to determine when the number of minutes specified by -M has elapsed. It then disconnects the caller by lowering the DTR line on the communications port specified. The base address is a unique identifier of the port to be used.

The number of minutes remaining for a caller is available when external protocols are executed via the %3 batch variable. This variable can be used in the command line in place of the number of minutes.

```
TIMEOUT -M%3
```

For example, if a caller has 45 minutes available on the BBS and enters an external protocol, the above command line is translated as -M45.

See the section on External Protocols in *Features in Depth* for complete example batch files.

VIEWCHAT

The chat file created by *WILDCAT!* is in record format, and is not easily readable without the VIEWCHAT utility. VIEWCHAT is invoked by following the command with the filename to view, such as CHAT.002 or CHAT.GRP. VIEWCHAT is not required to view the local chat capture file PAGED.CAP. The output is sent to the screen with no pauses. This allows redirection to a plain ASCII file for archival purposes with the command:

```
VIEWCHAT CHAT.001 > CHAT001.TXT
```

or page paused screen display with:

```
VIEWCHAT CHAT.003 | MORE
```

which will pipe the output through the DOS MORE program with appropriate screen pauses. A similar command might redirect the output to the printer with:

```
VIEWCHAT CHAT.GRP > PRN
```

With proper batch file operation this utility may be included in events to print the previous night's chat files to disk or printer and erase them if desired.

WAIT! & WAITFOR!

These two programs are handy utilities to add pauses to batch file operations. WAIT! simply pauses for five seconds (by default), and can be instructed to pause for any number of seconds with a command line argument such as WAIT! 30 to pause for 30 seconds. The time counts down on screen and the batch file continues at expiration.

WAITFOR! accepts a command line argument for the *time of day* that the pause should be released. The time must be in 24 hour format such as 15:00 for 3 pm. WAITFOR! displays the time on screen as it awaits the designated time, then it simply stops running, passing control to the next batch file line.

These two utilities may be useful in event scheduling to keep all nodes inactive for a period of time. WAIT! may also be used in a network setting to delay workstation login to the server long enough for the server to completely initialize and get ready for the workstations.

wcFILE

wcFILE is a utility for adding files and file descriptions to your *WILDCAT!* database, whether those files exist on your hard drive in your regular *WILDCAT!* file areas, on CD-ROM in regular *WILDCAT!* file areas, or in any path or subdirectory on your system, whether it's on a CD-ROM, a hard drive, or even off-line.

wcFILE should always be run from your *WILDCAT!* home directory (the one that contains MAKEWILD.DAT). It must be run with a unique WCNODEID= setting, or you will defeat the file locking mechanism and corrupt your databases. If you are running the single line version under DESQview, you MUST bring down *WILDCAT!* before running *wcFILE*. If you are using the Autonode feature on a multiline system, *wcFILE* will find a free node number to use.

Interactive operation

Here is a brief overview of the way *wcFILE* functions when used interactively:

WILDCAT! BBS has two ways of locating files within each file area on your system. The first way is to store files in the drive and path specified in the File Area Definition section of MAKEWILD.

The second way is to store files in other drives and paths throughout your system (including files in multiple subdirectories on a CD-ROM drive), adding them to a *WILDCAT!* file area by specifying their true path.

wcFILE supports both options, allowing you to add files anywhere on your hard drive, and practically any CD-ROM, to your BBS.

The Main Menu:

From the main menu you can select the following options:

Add With Description File

This option will add files to your *WILDCAT!* file database, importing descriptions from a prepared description file. This may be an ASCII text file on a CD-ROM, an ALLFILES list from a BBS, or a capture file from an online session.

The default here is to add files which exist in the drive and path pointed to by MAKEWILD's File Area Definition for each area.

You may also add files which exist in other drives and paths to a file area by using the Scan Files & Directories Into Memory option first. This procedure stores the true path for each file in memory, and adds this information to the file database when you add these files.

Add Files without Description File

This is a quick way to add files on your disk to your file database. You have the option to enter descriptions manually for each new file. This option only adds files which exist in the primary file area path specified in Makewild. Move the files to the path specified in MAKEWILD and then select this option.

Scan Drives & Directories Into Memory

This option scans a drive and/or subdirectory, and memorizes the file names and true paths. This is so *wcFILE* can locate the files in the case that they are not present in the directory as specified by MAKEWILD.

Scanning other drives and paths allows you to add files to a file area, even if the files exist outside the file area's path as specified in MAKEWILD. This is done by adding the file's true path to your file database. This option allows you to add files on CD-ROM drives with unusual directory structures.

Exit

Leave the program

Adding Files With Description

```
WCFILE v3.5 - File database utility for WILDCAT v3

                    Add Files With Descriptions
LAWMANS.GIF     13,585   03/06/92 | .GIF ad for the LAWMAN MAIL ROOM BBS,
DwnLds: 107  Last DL:    01/22/93 | Bakersfield, CA

LBDEMO1.ZIP    161,051   11/12/92 | An awsome vga/soundblaster ad! for The
DwnLds: 68   Last DL:    01/18/93 | Last Byte BBS!

LD.IMP             791   08/31/92 | An ad for THE LIONS DEN BBS! 410-758-4
<== File ==>                        <========== Description ==========
1         12                        34
     Move filename & description pointers: █ (enter to change)
   File group specified after description: N   Add to File area: 1
                     Set 'uploaded by' to: JOHN DOE
               Add keywords automatically: Y
             Insert extended descriptions: N
  Keep downloads and uploader information: N
       Add files not on disk as "offline": N
    Use today's date instead of file date: N
   Change descriptions for existing files: N
                  Mark files as on CD-ROM: N

ESC-Abort  F1-Help  F2-Pick  F10-Go
```

You will first be prompted to enter the drive, path and name of the text file you wish to import. If you know the drive, path and filename of the description file you wish to import, type the information into the window now. You will notice that the window will scroll left and right, allowing you to type in a full path.

Or, you may use the F2 key to bring up a pick list of files in the current drive and subdirectory. Press F2 again from this screen to get a pick list of available drives. Move the highlight bar to the drive or file you wish to select, and press ENTER.

wcFILE will load the selected text file into a window, and you will then see the screen pictured below. We are using ALLFILES.LST from the HQ BBS as an example.

wcFILE scans your text file for names and descriptions of files to import. A wide range of text file formats are supported — for example, an ALLFILES.LST from a BBS, a capture file from an online session, or a description file on a CD-ROM.

Here is a step-by-step discussion of the options available in this screen:

Move filename and description pointers: (enter to change)

For *wcFILE* to use your text file to import descriptions, you need to tell it where the file name and description fields begin and end. The arrows at the bottom of the file description should point to the start and end of the file name and description fields within the description file.

To line up the pointers with the beginning and ending of the name and description fields, press the TAB key to highlight an arrow, then move the arrow left or right using the LEFT and RIGHT cursor keys. You cannot make the file name field shorter than 12 characters, or the description field shorter than 20 characters.

Note that *wcFILE* will permit file names with interior spaces, as well as file names with a dot. For example, "LOGIN.COM" and "LOGIN COM" would both be considered valid by *wcFILE*. On the other hand, file names without extensions, for instance "LOGIN", would not be considered valid by *wcFILE*.

When you have positioned the arrows correctly, press F10 to continue.

File group specified after description:

Some CD-ROMS (for example RBBS in a Box) contain file group information at the end of the file description field, showing the file's true location on the disk. By answering "Yes" to this option, *wcFILE* will read the path information and store it in the file database. If a file group is specified, *wcFILE* will pop up a list of available file areas when it encounters a file with a new group number, so that you can match group number to *WILDCAT!* file area. "Skip this area" is an additional option in the pick list.

Add to file area:

You may add files to one *WILDCAT!* file area at a time. Please select the file area you would like to update. By default, only files which exist in the path specified in the file area definition for each area will be added. If you Scan files & directories into memory first, files specified in the description path, that reside in other paths or file areas will be added to the database. Press F2 to pop up a pick list of available *WILDCAT!* file areas.

Set "Uploaded by" to:

This is the name which will appear in the "Uploaded by:" field in the file database. The default is the name of the sysop, as entered in MAKEWILD.

Add keywords automatically

Select "Yes" for this option if you want *wcFILE* to generate keywords automatically from the file description, answer "No" to leave the keywords blank.

Insert extended descriptions:

If you answer "Yes" to this option, *wcFILE* will import multi-line file descriptions into the "Extended Description" field in your file database for each entry. Be aware that this will take additional space in your file database.

Keep downloads and uploader information:

If you answer "Yes" to this option, *wcFILE* will preserve the name of the uploader and the number of downloads for each file.

WILDCAT! two-line file descriptions containing this information are supported directly. Other text file listings should contain the information in the following format(s):

- The text "UPLOADED BY:" should be at the beginning of a description section.

- The number of downloads should be specified by " " or "[nnn]" at the beginning of a description section.

Add files not on disk as "off-line"

This option allows you to add "Off-line" files to your *WILDCAT!* database, by importing a list of filenames and descriptions for files which do not actually exist on your disk. *wcFILE* will set the "Off-line" flag in each database record, and *WILDCAT!* will prompt your users to generate a request to the sysop if they wish to download these off-line files.

Use today's date instead of file date

If you wish the files you add to your database to show up as "New files" regardless of the actual file date, *wcFILE* will add them to the database using today's date.

Change descriptions for existing files

If this option is set to "Y", *wcFILE* will use the file descriptions in the text file to overwrite the descriptions in your file database. This option is useful for adding descriptions to files currently in the database, but lacking descriptions, or to import a spell-checked, edited text listing of your file database to replace incorrect entries.

Use this selection with caution — it could overwrite valid file information with invalid information, or even describe a completely different file than the one in your database if a file name in the list happens to match a file name in your database.

Adding Files Without Descriptions

You may add files to one *WILDCAT!* file area at a time. Please select the file area you would like to update. By default, only files which exist in the path specified in the file area definition for each area will be added. If you use the Scan files & directories into memory first, files in other paths will be added to the database.

Add to File area:

Again, you may add files to one file area at a time. Press F2 for a pick list of available file areas.

Set uploader to:

This is the name which will appear in the "Uploaded by:" field in the file database. The default is the name of the sysop, as entered in MAKEWILD.

Use today's date:

If you wish the files you add to your database to show up as "New files" regardless of the actual file date, *wcFILE* will add them to the database using today's date.

Prompt for description:

Answer "Yes" if you would like *wcFILE* to prompt you to type in a file description for each file added to the database.

Add keywords automatically:

Answer "Yes" if you would like *wcFILE* generate keywords automatically when you type in the file description. This option may be selected only if you answer "Yes" to the "Prompt for description" option.

Scan Files & Directories Into Memory

This option scans a drive and/or subdirectory, and stores the file names and true paths in a temporary file. Use the Add With Description File selection after scanning with this option to add files to a WILDCAT file area.

Scanning other drives and paths allows you to add files to a file area, even if the files exist outside the file area's path as specified in MAKEWILD. This is done by adding the file's true path to your *WILDCAT!* file database. This option allows you to add files on CD-ROM drives with unusual directory structures.

This also allows you to add files to more than one *WILDCAT!* file area, when using the "Add files with descriptions" option. *wcFILE* will add ALL files it finds in valid WILDCAT file areas to the correct area if the disk is scanned prior to adding files with description.

To use this option prior to adding files, enter the drive letter, or subdirectories within a drive, that you wish *wcFILE* to scan.

Batch File Operation

wcFILE offers a number of command line parameters and switches, for interactive and batch mode processing. To use *wcFILE* in a batch processing event, the /D command line switch is required, along with any necessary combination of command line options listed below:

/D Add files w/o description - NON INTERACTIVE

/D:‹descfile› Add files w/ description - NON INTERACTIVE

Command Line Options

/M ..... Force Monochrome

/C ..... Force Color

/U:‹uploader› ..... Set default uploader

/A:area ..... Set default file area

/P:fs,fe,ds,de ..... Set default positions of start and end of filename and description for add w/description (if they're not valid the defaults of 1,12,34,76 are used). The length of the description must be at least 20, the filename at least 12

/S:scanarea ..... Drive/directory to scan at startup

/X:‹xreffile› ..... Load table of cross references for add with area specified
‹Listed File Area›,‹Wildcat File Area›
‹Listed File Area›,‹Wildcat File Area›
‹Listed File Area›,‹Wildcat File Area›

If this is not specified you will be prompted for each new file area.

/O ..... Set "Off-line" flag for files not found on disk

/R ..... Set "On CD-ROM" flag

/N ..... Do NOT insert keywords

/E ..... Insert extended descriptions

/K ..... Keep downloads and uploader info

/T ..... Use today's date instead of file date

/F ..... Freshen descriptions for existing files.

/3 ..... Compatibility with *WILDCAT!* 3.02 and earlier — the ON CD flag was treated differently in earlier versions of *WILDCAT!*

Here are some example command lines for batch processing:

```
WCFILE /D:\TEXT\MASTER.DIR /P:1,12,34,80 /A:1

WCFILE /D:\ROMAREA6.LST /S:G\ /A:12 /T
```

Adding CD-ROMs to *WILDCAT!* using *wcFILE*

Since each CD-ROM is arranged in a slightly different way, and updates are frequent and unpredictable, *wcFILE* takes a "generic" approach to adding these ROMs to your file database.

Your first task, when installing a CD-ROM to use with *WILDCAT!*, is to take a look at its structure. The easiest to install are those with lots of files organized into a group of directories by topic. A good example of this would be the CARRS (Nightowl) disk. Each subdirectory contains a text file listing the contents of that directory, with file names, dates, sizes, and descriptions.

All you need to do to install CD-ROMS organized this way, is to make a note of the paths on the CD-ROM, then run MAKEWILD and add each of these paths as a file area. Then run *wcFILE*, scan the entire disk, then select "Add files with descriptions". Type in the name and path of the description file(s), and let *wcFILE* process it.

Other CD-ROM disks are organized differently, with files in multiple subdirectories but belonging to the same file area. These require you to create a *WILDCAT!* file area that points to a subdirectory on your hard drive. Scan the disk using the "Scan Files & Directories into Memory", then use the "Add files with descriptions" option, as above.

wcFILE will enter these files in your *WILDCAT!* file area, and place the true location of the file in the "Path on CD-ROM" field in the file database. It will create zero-byte files for each file name on your hard disk in the primary file path you specified for *WILDCAT!* for this file area. The zero-byte files help speed up wildcard searches by reading a DOS directory rather than the file database for this function.

A third type of CD-ROM, typified by "RBBS in a Box" organizes files in multiple subdirectories, but includes a cross-reference number at the end of the file description line in the "DIR" file. If this information is present in the file, first scan the disk, then use the "Add files with descriptions" to add the files. Toggle the "File area specified at end of description" to "Yes", and let *wcFILE* add the files. *wcFILE* will prompt the operator to select a *WILDCAT!* file area for each cross-reference number.

Logging and Error Messages

wcFILE logs its activity in WCFILE.LOG, and reports the name of each file added to the database. When adding files with descriptions, any text in a description file which *wcFILE* is unable to parse will be logged for your examination.

Fatal errors cause *wcFILE* to exit to DOS, display a descriptive error message in bright white flashing letters on screen, and write the error message to the WCFILE.ERR log in the \WC30 directory before returning control to *WILDCAT!* These messages are usually self-explanatory.

Complete lockups are rare, and usually indicate a hardware problem, or a TSR or other program interfering with *wcFILE*. One type of program known to cause problems on some systems when used with *wcFILE* and *WILDCAT!* are TSR file compressor-decompressor programs — those which claim to increase hard disk space.

A few error messages may be the result of a corrupted Wildcat database — these are usually caused by running *wcFILE* and the single line version of Wildcat in two DESQview windows at the same time, or by duplicating node ID numbers in the multiline versions of *WILDCAT!* Certain third party utilities which do not lock and unlock files properly may cause share violations or locking problems if run concurrently with *wcFILE*.

wcMODEM

wcMODEM is designed to perform 3 basic functions:

NRAM Configuration—Since most modems designed today have the capability to store default settings in nonvolatile RAM (NRAM), *WILDCAT!* is designed to take advantage of this capability. To do so the modem must be pre-programmed with the settings required for *WILDCAT!* operation. The primary advantage offered by preprogramming NRAM specifically for *WILDCAT!* is short, reliable modem initialization. If NRAM is set properly, the only command needed to tell the modem to get ready to run is ATZ. In addition, the same modem initialization string can be used for any modem that has NRAM, even in a multiline system.

Preprogramming a modem's NRAM with *wcMODEM* is easy, and makes use of predefined .RAM files for setting NRAM for each modem. If your modem model is not included you can easily create your own .RAM file to set NRAM by following the guidelines given in the documentation.

MDM File Creation—A second function of *wcMODEM* is creation of custom .MDM files (modem configuration files) for modems that do *not* have NRAM capabilities. The MAKEWILD program allows loading a specific configuration with all necessary modem commands for any modem.

Modem Testing—The final *wcMODEM* function is to extensively test the modem and help with troubleshooting problems. Several tests help configure the modem delays and timing requirements, while others verify result codes and hardware operation.

Before we begin explaining the functions of *wcMODEM*, a review of some basics is in order.

.RAM Files vs. .MDM Files

These two file types are easily confused and the differences must be understood to make full use of each and the *wcMODEM* program.

.MDM files are stored on disk in the *WILDCAT!* home directory. In a single line system, the contents of a particular .MDM file is read into MAKEWILD and saved along with other settings in MAKEWILD.DAT. When *WILDCAT!* starts, it reads MAKEWILD.DAT and gets the modem settings needed. The .MDM file itself is never read directly by *WILDCAT!* in this situation.

Creation of MDM files is done with *wcMODEM*. If your modem needs specific settings that are different from the MDM files shipped with *WILDCAT!*, *wcMODEM* can create a custom file with the required initialization settings. MDM files contain modem initialization strings as well as complete result code information.

.RAM files are created by *wcMODEM* and are *only* used by *wcMODEM*. *WILDCAT!* knows nothing about them and cannot use them for operation. They differ from .MDM file in that they are *never* read by *WILDCAT!* and do not contain any result code settings. Their only purpose is to set the nonvolatile memory on a modem to contain proper initialization strings for *WILDCAT!*. Once the NRAM is set on a modem, it never needs to be reset, unless it is altered by another program.

One of the MDM files available for loading into MAKEWILD is called NRAM, and is used for any modem that can store its settings in nonvolatile memory. The NRAM MDF contains configuration information including result codes but does not need to send complex initialization strings on startup and between calls. A single command such as ATZ sets them all to the previously saved NRAM settings. The settings for NRAM modems *do need to be programmed* however, and the programming function makes use of the RAM files.

Main Menu

The main menu offers 9 choices, only 3 of which can be accessed immediately. The other choices require the communications port to be initialized prior to use.

Initialize modem port

This must be the first choice selected to perform any activity other than creation of .MDM files or exiting. This choice is used to open the port for activity and testing, and to create a RAM file, if desired. Selecting this option displays the following screen:

```
                    Initialize Port

Modem Name    :
Port #        : 1
Port's IRQ    : 4
Base address  : 03F8
Baud rate     : 2400
Modem delay   : 1500
Reset command:
Setup # 1     :
Setup # 2     :
Setup # 3     :
Write NRam    :
Dump  NRam    :
Notes         :

  F2 - Save Record      F3 - Load Record      F10 - Open Port

Port is CLOSED | Port #: 1 | Base Address: 03F8 | Port Irq: 4 | Speed: 2400
```

Before loading a RAM file for programming your modem's NRAM we suggest testing your modem port with a blank initialization. The Port #, Port IRQ, Port Base address and Baud rate must be set before the port can be opened. The Modem Name is not a required field for port initialization.

Note that changing the Port # from 1 to 2 also changes the IRQ and Base address to the DOS defaults, but allows editing for nonstandard installations. Ports other than 1 and 2 do *not* set the IRQ or Base address, and require manual editing of these values.

By way of review, the standard DOS port information is:

Port #	Interrupt #	Base addr.
COM1	IRQ 4	03F8
COM2	IRQ 3	02F8
COM3	IRQ 4	03E8
COM4	IRQ 3	02E8

Table 9-1

Once you have established the port information to match your system, open the port by pressing F10. If the port is located and successfully opened you are returned to the Main menu with all options available.

As mentioned previously, one of the primary functions of *wcMODEM* is to set NRAM (nonvolatile RAM) on modems with support for this feature. If you are not certain whether your modem has NRAM capability, check your modem manual. The command to set NRAM is usually &W, and can be tested using *wcMODEM* by selecting **Terminal mode** and typing AT &W. If an error is returned your modem does not support NRAM, and if either OK or its numeric equivalent 0 is returned, you have NRAM support.

Setting NRAM

NRAM settings are stored on disk in .RAM files in the *WILDCAT!* home directory. Each RAM file contains a set of initialization strings for programming NRAM in the modem, and that is all the .RAM files are designed to do. They do not replace the .MDM files and do not interact with the *WILDCAT!* program in any way. To program the NRAM in your modem select the Menu choice **Initialize port**. The initialization screen allows you to load a NRAM definition file using the F3 Load Record key. Pressing F3 displays a list of all .RAM files available.

```
                              Initialize Port

 Modem Name                  Load Record
 Port #          Z400        - Generic Z400
 Port's IRQ      ACCEXV3Z    - ACCEX v.3Z v.4Zbis
 Base address    BOCA144     - Boca v.3Zbis FAXmodem
 Baud rate       CARZ4EX     - Cardinal Z400
 Modem delay     CAR96V4Z    - Cardinal 9600 V4Zbis
 Reset comman    CARDZ450    - Cardinal Z450
 Setup # 1       COMPUCOM    - Compucom
 Setup # 2       DALFAX96    - Dallas Fax 96/96 v3Z
 Setup # 3       DESIGNER    - Designer 9600
 Write NRam      FCOM9600    - Fastcomm 9600
 Dump  NRam      FORVAL      - Forval V.3Zbis
 Notes           G-UFO       - Galaxy UFO V.3Z
                 GALXYUFO    - Galaxy UFO V.3Z
                 GVC14400    - GVP 14400 FAXmodem
                 HAYESZ4     - Hayes Z400
     FZ - Sav    HST         - U.S.Robotics HST w/o V.4Z        n Port
                 HST144      - US ROBOTICS COURIER HST 14.4
                 HSTV4Z      - U.S.Robotics HST Courier

Port is CLOSED | Port #: 1  | Base Address: 03F8 | Port Irq: 4  | Speed: Z400
```

Highlight your choice and press ENTER to load the settings on screen. Make any corrections needed to the port, IRQ, Base address and baud rate for your system. If your modem is not listed you need to create a .RAM file from scratch by reviewing the following discussion of each item:

Modem name—Enter the name of your modem with other descriptive information such as locked rate, etc. This is simply a descriptive field used for identification purposes.

Port—Enter the communications port number used for the BBS. Values from 1—9 are acceptable.

Port IRQ—Enter the interrupt request line (IRQ) used by the communications port. The standard DOS assignments for ports 1-4 are listed in Table 9-1. If communications port 1 or 2 are used, the standard DOS value is inserted here.

Base address—Enter the base address in memory used by the communications port. The standard DOS assignments for ports 1-4 are listed in Table 9-1. If communications port 1 or 2 is used, the standard DOS value is inserted here.

Baud rate—The baud rate for setting NRAM should reflect the highest rate supported by your modem. If your modem is capable of 9600, 19200 or 38400, you have the choice of opening the port at any supported speed, but may want to use a lower speed to accommodate doors that are unable to support 19200 or 38400. The higher the speed used, the faster the transmission will be, especially if you lock the DTE rate in MAKEWILD.

Modem delay—This is the delay between sending each startup setting line when setting NRAM. The default of 1500ms. (1.5 seconds) is adequate for most modems.

Reset command—Enter the command to reset your modem to the factory defaults. Most modems use AT &F for this function. It is sent to the modem prior to the startup strings to ensure that all settings begin with known values as specified in the manual.

Setup 1—This is the first of three lines available for entering commands to be sent to the modem for NRAM definition. The modem commands needed here are those that need to be *different* from the factory defaults for *WILDCAT!* operation.

Setup 2—Each setup line can contain as many settings as desired.

Setup 3—Any setup line may be left blank once all needed settings are entered.

Write NRAM—Enter the command used to write or save the current settings to your modem's NRAM. This is usually AT &W or AT &W1. This line is sent by *wcMODEM* after sending the startup strings, and stores the settings in modem memory (NRAM).

Dump NRAM—Enter the command to have your modem display the settings in its NRAM on screen. This command varies from modem to modem, but many follow the Hayes setting of AT &V. The US Robotics makes use of AT I4 for this function.

Notes—These lines are available to enter any information about the modem being defined. They may be used to explain dip switch settings or for notes explaining the reason for some of the startup settings.

For specific suggestions on how to configure a RAM file for your modem with correct startup commands, review the section *Modem Settings* later in this chapter.

View/Edit Modem MDM Files

The second menu choice lets you create .MDM files for loading into MAKEWILD. This operation is *only* necessary if your modem does *not* support NRAM, or has specific commands that must be loaded every time *WILDCAT!* is started that *cannot* be stored in NRAM.

In a multi-node system it may be necessary to establish different .MDM files for modems *if* they require different settings that cannot be saved in NRAM. In this case, the first node should be supported with a .MDM file loaded in MAKEWILD while the second .MDM file created in *wcMODEM* should be activated for node 2 through the environment command:

```
SET WCNODEID=2
SET WCMDM=XXXXX
```

In the above example XXXXX.MDM is the name of the modem definition file to be used by node 2.

When creating .MDM files in *wcMODEM* the screens displayed are identical to the 2-page display in MAKEWILD. Review the discussion of each item in the MAKEWILD section of the manual for details. In addition, see the section on Modem Setup later in the *wcMODEM* documentation for more detailed coverage of modem setup parameters and considerations.

Write Nonvolatile Memory (NRAM)

This menu choice is used to program the modem with proper NRAM settings for *WILDCAT!* operation. It should not be selected until a RAM file has been loaded using the first menu choice *Initialize modem port*. Writing the settings to NRAM is done with full-screen feedback to allow review of the modem response to each setup string.

First the **Reset string** is sent to establish the factory defaults. The modem response is printed on-screen, including non-printable characters such as Line Feed and Carriage Return. These characters are displayed inside brackets as [LF] and [CR]. Spaces are displayed as [SPACE]. This type of display ensures that all characters returned by the modem are printed, and allows verification that the modem properly precedes its "OK" response with a carriage return and line feed as required.

After sending the reset string *wcMODEM* sends the **Setup strings** in order, separated by the number of milliseconds indicated in the modem delay. After sending all setup strings it sends the **Write NRAM string** to program the nonvolatile memory.

The modem response to this sequence of events should be "OK" in every case, preceded and followed by [CR] and [LF]. Until local echo is turned off with the E0 command, the modem and screen will also echo the text of the command strings, including carriage returns, before displaying the modem response. The following is an example of a typical display:

```
Resetting NRAM
Sent: AT &F
Modem response: [CR][LF]OK[CR][LF]
Sending Setup String #1
Sent: AT E0

Modem response: AT[SPACE]E0[CR][CR][LF]OK[CR][LF]

Sending Setup String #2
Sent: AT &C1 &D2 &R2 &H1
Modem response: [CR][LF]OK[CR][LF]

Sending Setup String #3
Sent:
Modem response: [CR][LF]OK[CR][LF]

Writing to Non Volatile Memory
Sent: AT &W
Modem response: [CR][LF]OK[CR][LF]

- Completed - Press any key for menu
```

Notice that the AT E0 and the CR are echoed until echo is cancelled.

If any commands are not interpreted properly by the modem a result other than "OK" is displayed.

Show Nonvolatile Memory Settings

This menu choice is designed to be used to test that the correct settings were saved to the modem NRAM. It should not be selected until a RAM file has been loaded using the first menu choice *Initialize modem port*, and the NRAM has been written to the modem successfully. When selected the **Dump NRAM string** is sent to the modem causing it to display the previously recorded nonvolatile memory settings. This display could take on any format depending on the modem. After the display is completed, pressing any key returns to the menu.

Modem Timing Tests

This menu choice is used to perform timing tests on a number of modem operations. These tests are performed using the same program code as *WILDCAT!*, and give extensive insight into the timing and modem responses *WILDCAT!* must deal with when making a connection using your modem.

The series of tests begins by testing the amount of time needed between sending two different strings of commands to the modem. This is the **Modem Delay test**. *wcMODEM* first sends an ATZ command to reset the modem, which also lowers DTR and then tries to send a second AT command after 50 milliseconds. If the modem returns "OK" then the minimum time required is only 50ms. However, most modems require much longer than that to be ready for a second command after receiving an ATZ. If no response is received the time interval is increased between the two commands in 50ms. increments until the modem responds

"OK." The screen displays the actual response sent by the modem and then indicates the minimum number of milliseconds between command strings:

```
Test modem delay times between commands, please wait . . .
Modem response: [CR][LF]OK[CR][LF]

MINIMUM - Milliseconds between command strings: 550

- Completed - Press any key for Modem Answer test...
```

The value indicated here is the minimum needed for delays in both MDM files and RAM files. In the MDM file this delay corresponds to question #14, *Milliseconds between command strings*. It may vary, not only from modem to modem, but even on the same modem depending on the system activity. For example, under a multitasking program like DESQview the timing may vary depending on the other system activity and pending interrupts. This timing test is designed more for testing and diagnostic purposes than as a guide for setting the values in MAKEWILD or MDM and RAM files. *Unless your values exceed the recommended defaults you should not*

make changes. After the Modem Delay test is completed the **Modem Answer test** is automatically started when any key is pressed. When the test starts it waits for a call (from another modem) and provides complete logging of connection activity. Usually the first notification of a call is the Ring Indicator line on the modem (RI). When the call is received *wcMODEM* prints a series of progress messages such as:

```
Ring Indicated
Modem response: [CR][LF]RING[CR][LF]
Sent: ATA
MINIMUM - Milliseconds before answering: 3135
Modem response: [NO RESPONSE]
Time before Carrier Detected: 8 seconds
Result Code: [CR][LF]CONNECT[SPACE]2400/REL[CR][LF]
MINIMUM - Milliseconds to wait for result code: 2365

- Completed - Press any key for Drop DTR test . . .
```

Your display may be different from this example, but will contain most of the same information.

The first thing usually detected is change in status of the Ring Indicate line. When the phone rings it activates the RI line and *wcMODEM* prints **Ring Indicated**. If this line does not appear, or appears later in the display, it indicates that the RI line was not activated by the modem immediately when the call was received.

Immediately after seeing the RI line *wcMODEM* checks the modem buffer to see if any characters are present. If the modem has sent a result code *before* activating RI, there will be characters in the buffer and the contents are displayed. In the above example, the **Modem response: [CR][LF]RING[CR][LF]** was found in the buffer immediately after RI was detected. This is not always the case since many modems activate RI before sending a result code, and the buffer will still be empty immediately after RI is activated. In these cases the modem response line will *not* be present. Either method is acceptable, but each has its own timing loop.

After learning that the phone is ringing *wcMODEM* sends an ATA to the modem and prints the line **Sent: ATA**. It then calculates the time between first seeing the RI line activated and being able to send the ATA. This value is printed as **MINIMUM - Milliseconds before answering: 3135**. This value is the lowest number that should be set in the setting for question #10 *Milliseconds before answering* in MAKEWILD or MDM files.

The next line displays the modem response to the ATA command. ATA is one of the few modem commands that doesn't generate a response, and **Modem response: [NO RESPONSE]** is a correct progress message.

The next progress message is displayed after carrier is detected from the remote system. **Time before carrier detected: 8 seconds** indicates 8 seconds elapsed between sending the ATA and getting a carrier from remote. This value can change from

call to call depending on the baud rate, modulation negotiation, protocol handshaking options and other inter-modem activities. Some modems take a *much* longer time to negotiate carrier, and a long delay at this point causes no problems. *wcMODEM* indicates the timing of this phase for information only.

As soon as carrier is detected *wcMODEM* watches for a result code from the modem. The amount of time it takes the modem for this critical task is important, since *WILDCAT!* must know how long to wait for the full connection information. Complete connection information is sometimes sent as two separate lines of information and *WILDCAT!* must know when to assume that all needed information has been received. In our example all information received is displayed in the line **Result Code: [CR][LF]CONNECT[SPACE]2400/REL[CR][LF]**.

The text received is important since *WILDCAT!* expects every verbal code to end with a carriage return/line feed combination. If either of these is not included, the modem is not formatting its result codes correctly.

Immediately after receiving the result codes *wcMODEM* indicates the amount of time between detecting carrier and receiving the result code. The line **MINIMUM - Milliseconds to wait for result code: 2356** indicates it took 2.356 seconds to receive the information once carrier was found.. The minimum time to wait for result code value dictates the number entered in question #13 *Milliseconds to wait for result code* in MAKEWILD or MDM files.

Modems following industry guidelines do not indicate carrier detection until they have first determined the necessary information to present a connection result code. This results in a relatively short time between carrier detect and receipt of the result code, and is the preferred practice. If a modem takes longer than 9999 milliseconds (almost 10 seconds) to return a result code, information about the connection may be lost.

After the connection is established and the previous tests completed, *wcMODEM* performs a test of DTR line (data terminal ready) operation. Lowering of the DTR line is used to tell the modem to hang up the phone when a caller says [G]oodbye, and must be properly configured. The DTR test lowers the DTR line for 25 milliseconds and checks to see if carrier was disconnected by the modem. If not, DTR is again lowered, but for 25ms. longer and carrier is again checked. The time DTR is lowered is increased by 25ms. for each test until carrier is finally dropped in response to the lowering of DTR. The amount of time required to lower DTR to cause disconnect is indicated by the line **MINIMUM - Milliseconds to lower DTR for hang up: 25**.

If lowering DTR does not disconnect the caller there is a problem with the setting for either CD or DTR. The correct configuration for these two items is important.

CD—The Carrier Detect line must *not be forced on*. It should be set to reflect reality or to follow software. Although some older modems and the US Robotics HST line have a dip switch to control this item, most make use of the modem com-

mand AT &C# to tell the modem how to handle carrier. **AT &C1** usually indicates carrier should be tracked accurately, i.e., only show carrier when it is actually present.

DTR—The DTR line is the line between the modem and PC that indicates the Data Terminal (PC) is Ready. When the PC software lowers the signal on this line the modem is programmed to take some action, since it indicates the PC is no longer "ready." Although some older modems and the US Robotics HST line have a dip switch to control this item, most make use of the modem command AT &D# to tell the modem how to handle a lowering of the DTR line. One choice is to ignore the DTR transition but the required handling for *WILDCAT!* is to Hang up, disable auto-answer, and return to command state. This is usually the *AT &D2* command.

Improper settings of either of the above could cause failure of the DTR test.

UART Classification Test

This test looks at the UART chip (Universal Asynchronous Receiver-Transmitter) and displays the chip identification, if possible. The 8250A chips were used traditionally on older PCs and add-on cards, and can be positively identified. The 8250B and newer 16450 chips carry the same identification information and cannot be distinguished. The 16450 has been traditionally used on newer ATs and in VLSI chips that integrate multiple system components. The 16550 UART can be positively identified and adds FIFO input buffering.

After completing the identification *wcMODEM* performs three UART tests for proper operation. Status for each test is indicated on screen. If the UART fails any individual test, contact Mustang Software Technical Support for additional information. *Warning: this test may cause some ARCNET workstation connections to terminate a server connection.*

Terminal Mode

wcMODEM's terminal mode does not emulate any specific terminal type, nor does it perform any interpretation or modification of characters received. It does display Ring Detect notification when it is received and timing for the DTR option when Hang up is requested via DTR. Terminal mode is used to communicate with your modem and to test various operational parameters.

The upper right corner of the screen contains 5 modem status indicators which are displayed in reverse video when active.

CD—Carrier Detect should only be active when a caller is connected. You can see the effect of forcing CD true by entering AT &C0 if this command is supported by your modem. *Remember, this is not the correct setting for WILDCAT! operation.*

MR—Modem Ready should always be true when your modem is connected and turned on. It is the indication from the modem to the PC that the modem is ready, and is controlled by the modem. Turning off the modem will usually lower the MR and DTR line.

DTR—Data Terminal Ready should also always be true when your modem is connected and turned on. It is the indication from the PC to the modem that the terminal (PC) is ready, and is usually controlled by the PC. If the modem is disconnected or turned off, the DTR line is lowered.

RTS—Request To Send is a hardware line on the serial interface that is controlled by the terminal (PC) or software. The modem will only send incoming data to the PC when RTS is high, indicating that it is ready and can accept data. This line is usually active, unless specifically lowered during a connection.

CTS—Clear To Send is a hardware line on the serial interface that is controlled by the modem. The modem lowers CTS when its can no longer accept data, and raises it again when it is ready to accept data again. This line is usually active, unless specifically lowered during a connection.

The two bottom lines are status and menu lines. The port status (open or closed), Port #, Base Address, IRQ and Speed are displayed on the bottom line and the function key assignments on the top.

F2 **Hang Up**—Hangs up the modem using lowering of DTR. If the hang up is not successful, the DTR transition time is increased in increments of 25ms. until it is successful or ESC is pressed. The time required for hang up is indicated on screen.

F3 **DOS**—performs a shell to DOS. To exit back to terminal mode you must type EXIT.

F4 **Answer Phone**—Sends the modem answer command ATA to the modem. This is simply a shortcut for testing purposes, and performs the answer exactly like *WILDCAT!*.

F5 **Reset**—Sends the standard modem reset command ATZ. If you use a different reset command, enter it manually.

F10 **Menu**—Returns to the *wcMODEM* menu and exits terminal mode.

Terminal mode is designed to help discover modem problems by providing a controlled environment for testing. Every character passed through the communications port while terminal mode is active is logged to a file called **WCMODEM.LOG**. The

contents of this file is erased every time terminal mode is entered, but it may be helpful to Mustang Software Technical Support staff in determining unusual modem problems.

Terminal mode is not designed to replace a good communications program, and should be used for testing and evaluation only.

LoopBack UART Test

The loopback test is designed to make certain that your UART can handle full-speed transmission of characters without data loss. It sends alphanumeric characters and punctuation and tracks the number of characters sent and received, as well as any UART errors. If no problems are encountered the number of characters sent and received will be the same, and all error counts will be zero. If problems are encountered contact Mustang Software Technical Support.

wcMODEM — MDM & RAM Configuration Considerations

WILDCAT! is distributed with a set of .MDM files and .RAM files suitable for most modems. In the event you need to create or modify either .MDM or .RAM files, make note of the following settings that are important to *WILDCAT!* operation.

Data Terminal Ready (DTR)—AT&D2—One of the pins on your cable or connection between your computer and modem is DTR, which is used to assure that the two can talk to each other. *WILDCAT!* controls the operation of DTR and uses it to manipulate the connection. One of the main uses for DTR is to tell the modem that a caller has pressed G for goodbye and wants to hang up. The DTR function is controlled either by a switch or the &D command. It can usually be either *forced on* or *normal*. *WILDCAT!* needs a *normal* setting in order to be able to raise and lower DTR to tell the modem when to hang up the phone. The proper modem command is usually **AT&D2** which tells the modem to *hang up, disable auto-answer and return to command state*. Some modems have a dip switch that controls this function.

Verbal/Numeric Result Codes—ATV1—This AT command or modem switch controls the type of responses the modem sends to the computer for connect, ring detected, etc. The two choices are Verbal (also called verbose) or Numeric (also called terse). *WILDCAT!* must receive Verbal codes, and sets this by use of the ATV1 command. If a dip switch controls this item it must be set to Verbal since some modems (the USR HST in particular) will not allow the V1 command to override the switch setting.

Auto Answer—ATS0=0—The preferred method for *WILDCAT!* to use in answering the phone is by monitoring the Ring Detect Line, rather than having the modem auto answer the phone. The auto answer S-register should be set to *not* answer

(S0=0). If instead you elect to answer the phone by auto answer (in MAKEWILD), this must be set to have the modem perform auto answer with AT S0=1. Some modems have a dip switch that controls this function.

Carrier Detect—AT&C1—This setting is *very* important. *WILDCAT!* monitors pin 8 to determine whether a carrier exists to know if someone is online. If this setting is incorrect, the modem reports that carrier is present all the time, and *WILDCAT!* cannot tell when someone hangs up. It should *not* be forced true or forced on. It *must* be set to reflect reality or to follow software. If *WILDCAT!* is started with CD forced true it displays the message "Modem Carrier Detected; must lower to initialize. —Tries: 1...", and will retry several times. The default for many modems is CD forced true, and must be changed. Some modems have a dip switch that controls this function. Other settings for individual modems may also be needed, but are too complex to be covered in this section. *Appendix A - Modems* reviews additional settings in detail, especially for high-speed modems with error-correction.

wcRENUM

wcRENUM is a separate program used to renumber messages in a message database starting at 1. It also performs updates to each user's last message read pointer to properly reference the new number.

Two versions of the program are provided. WCRENUM.EXE uses conventional memory and runs on 8086 and higher machines, while WCRENUMX.EXE uses protected mode in 80386 and higher computers only. Some 80286 computers may be able to use wcRENUMX, depending on memory configuration. An error message will result if wcRENUMX is incompatible with your memory manager.

wcRENUMX allows for faster operation if sufficient extended memory is detected, and requires the provided files RTM.EXE and DPMI16BI.OVL to be present in the \WC30 directory.

wcRENUM must be started with a command line argument for the number of the conference database to be renumbered. If no number is supplied, a command summary is displayed. Conference numbers may be listed in groups or individually separated by spaces. The switch /A renumbers all conferences.

```
WCRENUM 3-7 9 11 22-29
```

The command above results in renumbering conferences 1 through 7, 9, 11 and 22-29. Renumbering may be run as an event if desired, but all other nodes in a multi-line system must be down during the renumber process.

During renumbering the message numbers in the databases are deleted and updated. Faster operation is possible using the command line switch /Q to indicate a Quick renumber. When /Q is used the database is copied to a backup file name and a completely new database is created with updated information. This operation is faster than the update key method. Keep in mind that /Q requires enough disk space to hold 2 copies of your largest database files.

It may be necessary to reset high message pointers in your network mail software, if applicable, to prevent loss of mail or exporting of duplicate messages. Please consult the documentation for these programs to determine the correct procedure for resetting high message numbers.

wcREPAIR

wcREPAIR is designed to fix damaged databases and to review operational files. This utility seldom needs to be run, except when an inconsistency develops in these files. The symptoms of such a problem include incorrect index numbers for a database in the [S]tatistics screen on the Sysop Menu or error messages indicating a database repair is needed. This program should *not* be run on a regular basis as preventative maintenance. DO NOT RUN FROM A DOS SHELL SUCH AS ALT-D.

wcREPAIR is menu driven and allows the sysop to select the area to be repaired or edited.

Choices are the file database, message databases, user database, master file and node information file (NODEINFO.DAT) and Door configuration file (DOOR.DAT).

Database Repair

The first three choices rebuild the database index file from the data file with an option to check the data file for errors as well. Since there is only one file database and one user database, these repair procedures commence immediately after being

selected. In the case of the message database a second pop-up window allows selection of the database to be repaired. Multiple databases may be selected in the pick-list, but usually repairs are only needed on the single database having a problem.

When repairs are selected you are prompted whether you want to rebuild the index files only. Answering Y starts a quick repair which assumes your .DAT file is not corrupted. Although this assumption is valid (most problems are related to index corruption), you can complete a total scan and repair of the .DAT and .IX files by answering N. When the repair is begun a pop-up window is displayed with feedback on the progress of the repair.

The only file needed for this reconstruction is the .DAT file. If an index only repair is requested, this file is read record-by-record and a new index file is created. If any records in the data file (.DAT) cannot be read, *wcREPAIR* aborts with an error message. In this case, restart the repair of the database, but when prompted for a rebuild of the index file only, answer N to force reading and correction of the .DAT file as well.

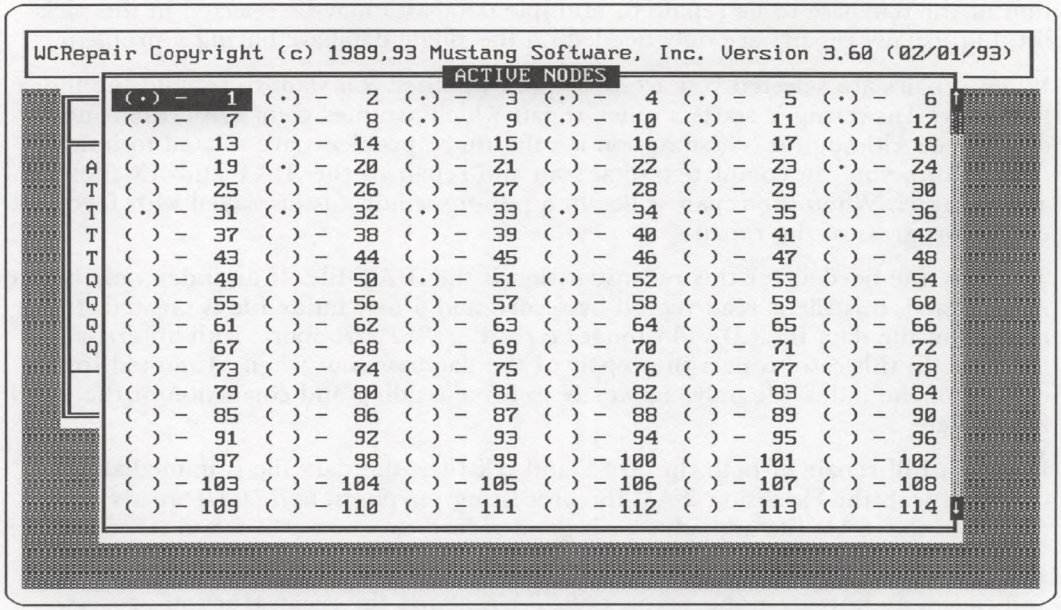
During a full repair of both the .DAT and .IX files, the data file is immediately renamed with the extension .SAV for processing purposes. *wcREPAIR* reads each record in the .SAV file and adds each good record to a new .DAT and .IX file.

If a corrupted record is found it is discarded, if possible. If a record is corrupted and causes an unrecoverable error, *wcREPAIR* aborts the reconstruction process. Should this occur, the original data file with the extension .SAV is left on the disk along with the reconstructed new .DAT file up to the point of the severe problem. In order to salvage the largest number of good data records you need to perform a second *wcREPAIR* pass on the new .DAT file, which now contains only good information up to the point of corruption in the original file. However, this second pass may *not* be started with the .SAV file from the previous pass on the disk or an error will be generated. You may either copy the .SAV file to a backup directory (remember, it is actually a copy of your original bad .DAT file) or you can delete it. Once the repair is begun again using the good .DAT file, proper index files will be generated.

Master File Editing

The fourth choice is to edit the MASTER file which tracks the total number of calls for the system (all nodes sharing a master file), total messages, file and users, all quick statistics, and basic node status (up or down). A pop-up window allows selection of the master file item to be modified.

The first choice in the window allows modification of the node status screen. Placing the cursor to the right of the words **Active nodes** and pressing ENTER brings up the following additional window:



Each active node number is shown with a dot to the left, indicating that it is currently "active" in some manner, either taking calls, or otherwise in service. This status dot may be changed by pressing ENTER when the cursor is located next to the node in question, or by clicking with the mouse. After adjusting the node status as desired, press ESC to return to the previous screen and save your changes.

Altering the node status in this manner is needed if a node experiences a hard crash, such as an unexpected power failure, and you are unable to perform some activity that checks for all nodes to be inactive.

The other options in the Master file edit window allow adjustment of the number of calls, users, files, messages, and quick statistics. Changing the number of calls is often used to pre-load the number of calls received when first setting up *WILDCAT!* after using the Test-Drive version. The other numbers should not be manipulated as they are automatically updated and corrected by *WILDCAT!* and *wcREPAIR*.

The last item, **F2 - Calibrate messages** updates the Idle screen count of messages from *all* conferences. *Never* run this selection with nodes active.

Node Information File Editing

Editing the node information file is the next choice, and is probably the most complex *wcREPAIR* function. When this item is selected a pop-up window allows selection of the node to be viewed or modified. The following screen is displayed when a node is selected:

```
WCRepair Copyright (c) 1989,93 Mustang Software, Inc. Version 3.60 (02/01/93)

                              Edit Node 28

Node status        Up                      Sysop page enable      Y
Chat status        Available               Line printer enable    N
User status        None                    Sysop bell enabled     N
Sysop window       None                    Keyboard enabled       Y
Caller             GWEN BARNES             Local next enabled     N
Calling from       Mustang Software, Inc.  Screen writes enabled  Y
Baud rate          0                       Event next enabled     N
Time called        02/03/93 08:00          Bring down enabled     N
Time off           02/04/93 00:39          Drop caller            N
Request node       0                       Sysop paged            N
Quote index        7007                    On locally             N
Current conference 0                       Sysop next enabled     N
Node calls         142                     VGA mode enabled       N
No 300 baud        N                       No 1200 baud           N
No 2400 baud       N
```

The node information edit screen displays the selected node with full detail about the current activity. The meaning of many of the node display items is obvious, while others may not be immediately clear.

Node Status is not usually seen by the sysop and may be toggled through the available choices by pressing SPACE after selecting the field. *Up* indicates that the node is active and ready for calls. *Down* signifies that it is not actually running *WILDCAT!* at this time. *Signing on* is displayed while a caller is in the process of entering logon information. *Crashed* indicates the node is not in operation as a result of a fatal error. *Event* indicates an event is in progress. *Stay down* indicates the node is not in operation, and cannot come up until the node status is changed to Down. Stay down is used to keep all nodes down while operations affecting all nodes are completed. External programs can manipulate this status item to keep nodes from starting up until the external operation is complete. It is reserved for future program development.

These status items are used by *WILDCAT!* for its status displays and will normally indicate *Down* when viewed from *wcREPAIR*.

Chat status lets each node know whether a caller on another node is available for inter-node chat. The choices available with the spacebar include *Available*, *Unavailable*, *Request* (when a node has made a request of another), *Paged* (when a node has been paged but has not answered) and *Group* (when a caller is in chat). These items are also altered by *WILDCAT!* and seldom need to be changed.

User status indicates what the caller is doing at the present time. Since the node information screen is only accessible when all nodes are down, most user status indicators should read *None*, indicating that no one is currently connected. When no one is online, the caller name and other information reflects the last active caller.

Sysop window indicates the size of the user display window for the sysop on the local terminal. The choices are *None*, *Small* (2 lines), *Medium* (5 lines) or *Large* (16 lines).

The balance of the fields represent toggles and flags for the node in question. To display a different node press [ESC] and select the node from the list.

The NODEINFO.DAT file is constantly updated by *WILDCAT!* during operation, and is the heart of the tracking system. It is locked and unlocked as needed, and must be available when the system is in operation. If it becomes corrupted it may be deleted since a new one is created if it does not exist, but this should not be done unless all nodes are down.

The CATEYE program and several doors use this file to manipulate node activity. It is easy to imagine a door which is capable of changing the player's time remaining or other information through this file.

WILDCAT! checks it regularly, which is how CATEYE is able to make changes to any node from any network location.

Changes made to the node information file are saved when [ESC] is pressed to exit the display.

Editing DOOR.DAT

The last *wcREPAIR* choice is to edit the DOOR.DAT file. The resulting pop-up window displays the status of the Mail Door, all DOS hooks, and all doors on the system.

The primary reason to edit DOOR.DAT is to reset the *In use* flag to make a door available again. As indicated in the documentation for doors in the section *Features in Depth*, *WILDCAT!* limits access to a door already in use if it is not a multi-user door. This is accomplished by use of the DOOR.DAT file. Each door has a flag indicating

whether it is *in use* or not, which is updated every time a caller enters a door. If the flag indicates *in use* Y, then other callers are prevented from entering the same door unless it is multi-user.

The *in use* flag may become set improperly if a door causes a hard crash and *WILDCAT!* cannot recover enough to reset the flag to N. In this case callers will constantly be told that a door is in use when it is not. Simply change the flag to N to correct the situation.

Chapter 10
Tomcat and Net/Echo mail

"No matter where you go, there you are"
Buckaroo Banzai

In this Chapter...

- *Tomcat*
  QWK-compatible mail door for *WILDCAT!*
- NET/ECHO MAIL
  A variety of approaches
- OFF-LINE XPRESS
  Off-line QWK-compatible Mail Reader

Mail Doors & Off-line Readers

A mail door allows a user to call into the BBS and request all new messages in selected conferences. These messages are packed together in a compressed file and made available for download to the caller using a choice of protocols. All this activity takes place from a menu choice on the message menu, and is the primary reason for the MAIL door option at that location.

Once a mail packet has been downloaded, the caller disconnects from the BBS and uses an off-line reader to extract and read the messages in the packet. While reading, replies can be entered as desired using a wide choice of editors. The user then calls back at his convenience and again uses the mail door, this time to upload his reply packet.

The most popular mail door for *WILDCAT!* sysops is *Tomcat*. It provides a seamless interface to *WILDCAT!* and fully supports all message database features such as titles, alias names, conference limitations by security profile, etc. It is a robust product that handles all file and record locking in a multi-node environment. A fully registered copy of *Tomcat* is included with *WILDCAT!*. *Tomcat* also allows you to exchange messages between one BBS and another, even those using software other than *WILDCAT!*, by using a mail tosser such as TNet for *WILDCAT!* BBS, or any of a variety of other QWK-compatible network mail products for other BBS programs.

Other mail programs may also be used with the mail door option.

Setup & Operation

The mail door is installed in exactly the same manner as a door and uses the same operational procedures. The only difference is the name of the file invoked. Like doors, the batch file to run the mail door may be located either in the home directory or in each node's work directory. If located in the *WILDCAT!* home directory the batch file must be MAIL.BAT, and if in the node work directory it must be MAIL.RUN.

When the message menu mail door option is selected, *WILDCAT!* first looks for MAIL.RUN in the node work directory. If located, it is copied to the name MAIL.BAT and it is executed in the same manner as a door. If it is not located in the node work directory *WILDCAT!* checks the home directory for MAIL.BAT. If it is located it is copied to the node work directory and executed from that location.

The method of execution for MAIL.BAT depends on whether *WILDCAT!* is set to terminate for doors & DOS Hooks or to shell. If set to terminate, the appropriate checks must be included in your CAT.BAT file to look for the existence of MAIL.BAT in the node work directory and to execute it if found.

As mentioned many times previously, it is much easier to execute all doors and hooks by using a shell, since no batch command tests need be performed. See the section on door execution for additional detailed discussion of door operation. The only difference between a standard door and this mail door function is the name of the batch file used, MAIL.BAT rather than DOOR.BAT.

Installation

Tomcat is extremely easy to install and configure. However, the success of your installation depends on having a good understanding of *WILDCAT!* and DOS before you start, and reading at least the "Installing *Tomcat*" portion of this documentation.

Here is the installation procedure, step by step:

1. First, make a backup of your BBS files.
2. Using the WINSTALL program on your "Install" disk, select the source and destination paths, then select "Install *Tomcat* and TNet" from the "install options" menu. WINSTALL will then extract the files from the distribution disk and copy them to your WC30 directory.
3. Next, run *tcMAINT* to create *Tomcat*'s configuration file. See the following section for detailed information on using *tcMAINT*.

MAKEWILD

The next step in the installation process is to run MAKEWILD, and make a few alterations to your system setup.

To begin the installation, run MAKEWILD in your *WILDCAT!* home directory, and go to the "Message menu definition" screen in MAKEWILD. Verify that the "[D].....Download Mail" menu is worded appropriately, and has a menu level allowing your callers to execute this function.

The next step is the "Door Definition" screen of MAKEWILD.

Tomcat is a multi-user door, and can handle any number of callers concurrently. If you're running the Multiline or Professional versions of *WILDCAT!*, you will need to change the "Multiuser" flag to "Y" for the Mail door to enable this mode. If this is set to "N", all other callers will be kept out of the mail door while it is in use.

The next step is to edit the batch file that starts *Tomcat*. Its name is MAIL.BAT.

If you have installed *Tomcat* according to the instructions above, when your caller goes to the message menu and selects [D]ownload mail, *WILDCAT!* will then swap out to disk or EMS, then execute MAIL.BAT. The contents of MAIL.BAT should be something like this:

```
\WC30\TOMCAT
```

Assuming you start *WILDCAT!* from your \WC30 subdirectory, no other commands are necessary, or recommended. The batch file executes *Tomcat* from the *WILDCAT!* home directory. When *Tomcat* terminates, *WILDCAT!* immediately swaps back in and resumes its normal operation.

Your next step is to create a TOMCAT.CFG file, using the *tcMAINT* setup program. Most of the information *Tomcat* requires at runtime is read directly from *WILDCAT!*'s data files, with the remainder of the necessary information supplied by TOMCAT.CFG.

While you are using *tcMAINT*, you may wish to consult the next section of this manual for a detailed explanation of each menu selection. Remember to save your settings by pressing F10.

When you have saved your settings and exited *tcMAINT*, you should now test installation and verify that *Tomcat* is working correctly. Start up *WILDCAT!*, and do a local logon. Go to the Message menu, then select Download messages. If you have installed *Tomcat* according to the instructions above, *WILDCAT!* will shell out and execute MAIL.BAT, and in a few moments you will see the *Tomcat* opening screen.

You should then try downloading a mail packet locally, to verify that all your paths are correctly set, and that the external programs required by *Tomcat* are present in your DOS path or in your \WC30 subdirectory. The next step would be to have someone call into your system over the modem, then enter the mail door and download a packet, to verify that remote connections are working correctly.

If you need to terminate *WILDCAT!* for doors and menu hooks, a more complicated setup, including batch files which test for the existence of other batch files, is required. Please read the "Drop to DOS processing" and "Doors" sections of Chapter 7.

tcMAINT - The *Tomcat* Configuration Editor

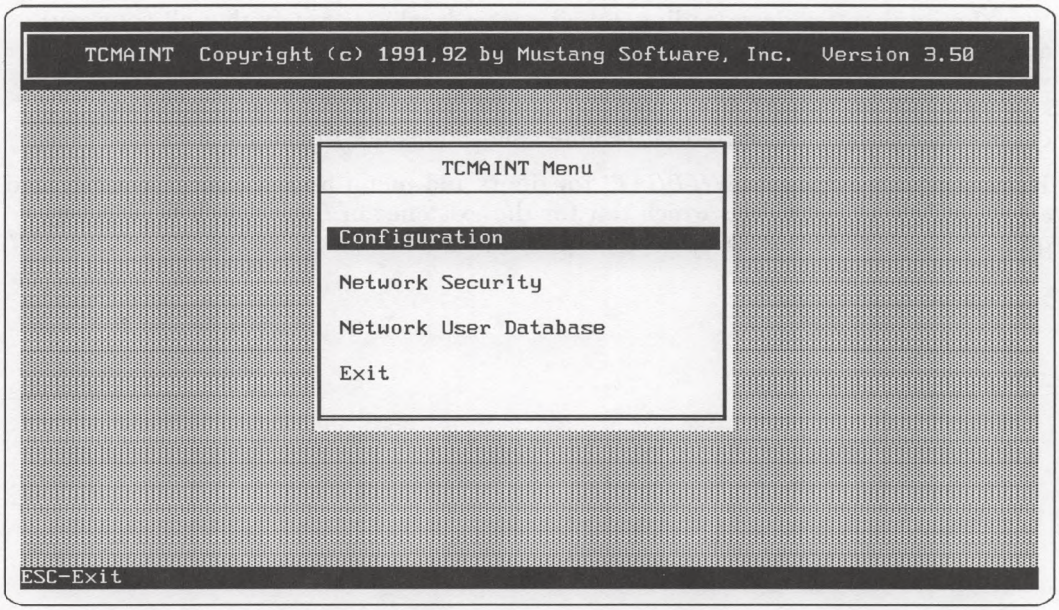
TCMAINT.EXE is the setup program for *Tomcat*, and is used to create and maintain *Tomcat*.CFG, assign network mail security access, and maintain your network mail user database.

Here is a list of active keys in *tcMAINT*:

- F2 displays a pick list of available choices for multiple-choice items.
- F10 Saves your settings.
- ESC Exit current screen, abort changes, exit *tcMAINT*.
- SPACE Toggles multiple-choice items.

Main Menu

The *tcMAINT* main menu looks like this:



Four options are available for editing and manipulation. The first selection, Configuration, is used to create and edit TOMCAT.CFG — the file which stores your main configuration settings for *Tomcat*.

To select an item to edit, move the highlight bar using your arrow keys or mouse, and press enter.

Configuration

The first menu selection allows you to edit TOMCAT.CFG. This is a plain ASCII text file consisting of keywords and values, and may be viewed or edited from outside *tcMAINT* if desired.

The individual configuration items are displayed below, with a brief explanation of each item:

BBS Information

```
ID: MUSTANG
```

The system ID is the name *Tomcat* will give your .QWK files. This must be 8 characters or less, and contain valid DOS filename characters. We recommend ID names which reflect the name of your BBS. For example, the ID of the Mustang Software HQ BBS is MUSTANG. If your BBS is named, for example, "The Friendly BBS", a suitable ID name might be FRIENDLY.

```
City: Bakersfield, CA
Phone: (805) 873-2400
```

The City: and Phone: fields are for information only. The information is included in the packets *Tomcat* creates, and is displayed on the *Tomcat* opening screen.

```
Local directory:
```

This field specifies where *Tomcat* will place packets that have been created locally. If no directory is specified, the packets will be placed in the WCWORK\NODEx under the *WILDCAT!* home directory. This is also the directory where *Tomcat* will look for local REP packets.

```
Work directory:
```

Under normal circumstances, this should be left blank so that *Tomcat* will automatically create and use WCWORK\NODEx\TEMP under the *WILDCAT!* home directory, and is the recommended setting for multiline use. If you run a single line BBS and would like, for instance to use a different drive, or even a RAM disk, you may specify a path to another work area to speed up operation.

You should NEVER specify a complete path to a work directory for a multiline system, because all nodes then will attempt to use the same directory for temporary files. This will cause serious problems with corrupted packets, and could even cause *Tomcat* to exit with a fatal error!

See the section on Advanced Features in this chapter regarding TCNODE.CFG if you run a multiline system and would like to place *Tomcat*'s work directory elsewhere.

Toggles

```
Bulletins: Y
News: Y
```

When you update your system bulletins and newsletter file, you may include them by default in the mail packet your callers download. Note that callers are also able to turn these items off in their own individual configuration if they don't want to receive them.

```
Files: Y
```

This option allows your callers to receive a list of new files with their mail packets, if they desire.

```
Detail download: N
```

Tomcat updates your activity log when it executes, and will provide either a simple report or a detailed report. If you answer "N" to Detail download, *Tomcat* will log only successful uploads and downloads, the transfer speed, and the total number of messages sent. A sample of a simple report follows:

```
* MENU HOOK (MAIL.BAT) executed at 01:13
* TOMCAT mail packet download successful (CPS = 831)
  7 messages sent
```

Detailed logging is also available, by answering "Y" to the Detail download question. A detailed log entry looks something like this:

```
* MENU HOOK (MAIL.BAT) executed at 12:38
* TOMCAT mail packet download successful (CPS = 892)
  2 personal messages
  18 messages in 003 - WC! Door Help
  5 messages in 005 - WC! Net & Echomail Help
  118 messages in 100 - WILDCAT! FidoNet Echo
  11 messages in 101 - WC-TECH FidoNet Echo
```

Detailed logging is useful if you use a third-party program which reads your activity logs and generates a report of online and off-line message activity.

```
Reject duplicates: Y
```

Many callers new to the world of off-line mail readers forget to delete old reply packets after upload, and send the same replies, plus new ones, on their next call, causing duplicate messages to be placed in your database.

If the "Reject duplicates" option is set to "Y", *Tomcat* uses a mathematical algorithm to detect new messages which are identical copies of messages already in the database, and rejects the duplicates. *Tomcat* will create a MSGxxxx.CRC file for each conference in your message database path, if this feature is turned on.

Duplicate checking is especially useful if you have a lot of absent-minded callers who forget to delete old reply packets, or if you participate in BBS networks and wish to prevent duplicate messages from entering the network and echoing to other systems.

Miscellaneous

```
Propeller: Varied
```

Tomcat will update the message scanning screen in a variety of ways, depending how this option is set. The options are "Simple", which displays a spinning cursor; "Varied", which displays an assortment of ASCII characters; "Dots", which prints a row of dots on screen during the scan; "Count", which provides a count of the number of messages scanned; and "None", which displays nothing but the name and number of the conference being scanned.

```
Prescan Area: 26 (0 to disable this function)
Save packets: None
```

Tomcat is able to operate in command-line mode during a system event, and create prescanned packets ready for your callers to download. This is especially useful for network mail callers or long-distance callers who would like to minimize their time on line. Its secondary function is to save mail packets for later recovery if a caller accidentally disconnects during a download.

The "Prescan Area:" is a regular file area defined in *WILDCAT!*, where *Tomcat* will place its prescanned mail packets. To prevent callers from viewing or downloading mail that doesn't belong to them, *Tomcat* adds the file to the database and assigns a random file name to the saved packet, and protects it with the caller's system password.

The "Save packets:" options are: "All", meaning that all packets will be saved until they are successfully downloaded; "Net status only", meaning that network mail packets only will be saved; or "None", to disable the Save Packet feature. In order to use the Save Packet feature, you must enter a *WILDCAT!* file area in the "Prescan Area:" line above.

Baud Rate **Max Packet** **Max Conf**

This option allows you to configure maximum packet size according to the caller's baud rate. You can, for example, prevent callers with slow modems from staying online forever downloading large mail packets, by limiting the total number of messages they can download per packet. Your callers can also configure their own maximum packet size while online, within these sysop-defined limits.

One issue to keep in mind when determining the maximum packet size is the amount of available disk space and memory on your system — a 1000 message mail packet could easily be 700k or larger in uncompressed form, and requires about twice that much free disk space for packing. If you run a multiline system, but have limited free disk space available in your *Tomcat* work directory, your maximum packet size should take this limitation into account.

Packers

Tomcat allows you to give your callers a choice of which file compression utility they would like to use to create their packets. *Tomcat* requires these packers and unpackers to be in your DOS path or in your *WILDCAT!* startup directory. *Tomcat* will generate an error message if the packer is not found in the DOS path.

The letters, descriptions and command lines shown for each of the packers listed in the default settings will work without modification, and we definitely do not recommend changing command lines unless you are sure you know what you are doing.

You may add other packers to this list by selecting a call letter and providing a command line and default extension. Bear in mind, however, that many mail readers attempt to detect the packer type used by the mail door, and may fail if an unrecognized packer is used. Likewise *Tomcat* may be unable to detect a packer type used for a reply packet, and will generate an error message if it is unable to unpack the replies prior to insertion into the message base.

The default packers and their command lines are listed in the *tcMAINT* packer configuration screen. You may remove any of the default selections by deleting the call letter.

Short Conference Names

The final configuration setting allows you to substitute the long conference name entered in *WILDCAT!*, to a short 10-character name supported by your callers' mail reader programs. If no short name is specified, *Tomcat* will take the first 10 valid characters in the long conference name, and include those names in the packet. Below is an example of long and short conference names in use at the Mustang Software HQ BBS.

```
TCMAINT  Copyright (c) 1991,92 by Mustang Software, Inc.  Version 3.50

                    Tomcat Configuration
          Packer: PKZIPZ -ex !
        Unpacker:          Short Conference Names
                    0 - Private E-Mail ONLY        Private
                    1 - WILDCAT! General Help      WILDCAT!
          Packer:   2 - Qmodem/QmodemProSupport    QMODEMQMP
        Unpacker:   3 - WC! Door Help              DoorHelp
                    4 - WC! Ext. Protocol Help     ExtProtos
                    5 - WC! Net & Echomail Help    Net&Echo
                    6 - WC! Modem Operation Help   ModemHelp
Short conference    7 - WC! LANtastic Net Help     LANtastic
                    8 - WC! Novell Network Help    Novell
                    9 - WC! DESQview Help          DESQview
                   10 - WC! TOMCAT!/TNet Help      TOMCAT!
Conference  Bulle  11 - WC! Sysop Chit-Chat        SysopChat
                   12 - OLX/SLMR Mail Reader       OLX-SLMR
   0        0      13 - WC! PRO! Series Help       wcPRO!help
   0        0      14 - WC! 3rd Party Util. Help   3rdParty
   0        0      15 - QMODEM Test-Drive Help     QMODEM-TD
   0        0

Enter-Edit ESC-Abort
```

You may need to edit the short conference names if the long names for any of your conferences are the same for the first 10 characters. *Tomcat*'s short name for both conferences would then be the same, and would likely confuse callers and cause them to post messages in the wrong conference.

By changing the short name for conferences 1 and 2 to WILDCAT!3 and WILDCAT!2 respectively, we can keep our long descriptive conference names for online reading, and still have a meaningful name for the shorter conference description field in the .QWK mail packet.

Bulletins to Exclude

Specific bulletins may be excluded from the packet by listing the conference number and bulletin number for bulletins you do not want sent.

Network Security

This section of *tcMAINT* is used to assign network security access (for network mail transfers) to various security profiles in *WILDCAT!*. It has nothing to do with operating a BBS on a Local Area Network, but is used to allow other Bulletin Board Systems to exchange messages with your BBS in an echomail network. This option should ONLY be used for BBSs transferring network mail, and should never be toggled on for human callers, including the System Operator.

Normally, *Tomcat* will reject messages uploaded by a caller if the "from" name in the message does not match the name of the logged-in caller, unless that caller has Sysop access defined in their security profile. This is a security feature to prevent callers uploading messages using alias names.

Network Security allows a BBS to upload messages that are "from" other user names. *Tomcat* also places an identifying flag on these messages in order to prevent duplicate messages from bouncing from one system back to another.

Lastly, the message packets generated by *Tomcat* for callers with network security can be imported into other Bulletin Board Systems using a QWK-compatible network mail tosser such as TNet for *WILDCAT!*, or QNet for PCBoard. For security reasons, non net-status packets cannot be imported by any of these message tossers.

Setting a network security toggle for a security profile causes *Tomcat* to send special net status packets to all callers within that security profile.

Network User Database

The network user database contains a list of user names, and the node they "belong" to. This function will be discussed in more detail later.

Help Files

Two help files are available to your users. They are TOMCAT.HLP and TCONFIG.HLP. If these files exist in your HELP file path, *Tomcat*'s menus will display "[?] Help" as a command line option, and will display the appropriate help file if a caller selects this option.

Display Files

Tomcat has two display files, which, if they exist in your conference display file path, will be shown to callers when they enter the *Tomcat* mail door.

The first display file is TCNEWUSR.BBS. This file is displayed the first time a new caller enters *Tomcat*. It may contain a brief message from the sysop welcoming the caller and requesting her to visit the [C]onfiguration menu to select conferences, protocols, etc. A sample TCNEWUSR.BBS is included with *Tomcat*.

The second display file, TOMCAT.BBS, will be displayed in place of the regular *Tomcat* opening screen, if the file exists in your conference display file path. This allows you to create a custom screen for *Tomcat* if you prefer, rather than using the default internally-generated screen.

Note that if different conferences have different display file paths, you will need to create a copy of these display files in each path if you want these files to be displayed to all your *Tomcat* users. This does allow you to make conference-specific display files for *Tomcat*.

Tomcat may also be installed as a Door from the main menu, or from one or another of the available DOS hooks on other menus. The installation process is straightforward — simply substitute the batch file names and menu selections where appropriate.

You may also wish to consult the "Advanced Features" section of this chapter for information on how to customize your *Tomcat* installation by starting in other modes, using command line switches.

Tomcat Commands

Tomcat is organized into two main sections: the main menu, and the configuration menu. From the main menu, the caller can download and upload mail packets, log off, quit back to the BBS, or call the Configuration menu.

Each main menu and configuration menu command will be discussed below:

The Main Menu

[D]ownload QWK packet

Tomcat will begin scanning all open conferences for new mail. The number and name of each conference, the number of messages, high message number and last-read message number are displayed, along with a running total of messages packed during this session.

When all message conferences have been scanned, *Tomcat* asks the caller if she wants to receive the packet, offering "Yes", "No", and "Goodbye after transfer" as options. If the caller selects

"Yes" or "Goodbye after transfer", *Tomcat* will then shell to DOS and execute the selected packer utility to compress the packet and prepare it for download.

Tomcat will then return from DOS, and prompt the caller to begin downloading.

[U]pload REP packet

Tomcat will prompt the caller to begin uploading her reply packet. When the upload is complete, *Tomcat* will shell to DOS and unpack the reply packet, scan its contents, and insert the messages into your *WILDCAT!* message conferences.

[C]onfigure your settings

Changes to the Configure menu. More on this below.

[Q]uit back to BBS

Exits from *Tomcat*, and returns to *WILDCAT!* BBS.

[H] Help with *Tomcat*

Displays TOMCAT.HLP from the HELP path.

[G]oodbye

Logs off the caller, and exits back to the *WILDCAT!* waiting for calls screen.

Configuration Menu

[C]onfigure Conferences

This selection brings up another sub-menu, allowing callers to select conferences in the same manner as the [U]pdate conferences selection on *WILDCAT!*'s message menu. In fact, these two work interchangeably. Changes made in *Tomcat* to your selected conferences will affect on-line message reading within *WILDCAT!*, and vice versa.

A sub-menu prompt is displayed after the conference list:

```
Enter #, [L]ist, [+]Next, [S]ort, List [A]ll,
List [O]nly selected, [T]oggle menu, or [ENTER] to quit?
```

To select or deselect a conference, enter the conference number. The next prompt will be displayed:

```
Do you want to scan "WILDCAT! Version 3.xx" [Y/n]?
```

Answering "N" to this prompt will remove the conference from your selection list. Answering "Y" will display the following sub-menu:

```
Message numbers in this conference range from 6492 to 10784. Current is 10769.
Enter new message pointer, [H]elp, [ENTER = no change]:
```

The message pointer referred to in this menu is the number of the last message the caller read in this conference. This is stored in their user record, and may be moved back if the caller wishes to reread mail, or forward if the caller wishes to skip over old unread mail.

There are four methods of setting your high message pointer — by number, by percentage of total messages in conference, or by date.

Examples:

10	Sets your message pointer to 10
-10	Gives you the last 10 messages
10%	Gives you the last 10% of total number of messages
01/16/92	Gives you all messages since [date]

Sort by [N]ame or [C]onference number [n/c]?

The conference list may be sorted by name or number. The default sort is by conference number.

[R]eset high message pointers

The message pointer referred to in this menu is the number of the last message the caller read in this conference. This is stored in their user record, and may be moved back if the caller wishes to reread mail, or forward if the caller wishes to skip over old unread mail.

There are three methods of setting your high message pointer — by number, by percentage of total messages in conference, or by date.

Examples:
-10 Gives you the last 10 messages
10% Gives you the last 10% of total number of messages
01/16/92 Gives you all messages since [date]

[U]pload MUSTANG.PTR file

Mail packets created by *Tomcat* 3.01 and higher contain a pointer file. This file is an image of the high message numbers before and after the last mail packet download. It is useful for resetting pointers after a failed transfer, or to recover lost messages if a packet is accidentally deleted.

To use this function, the caller must first extract the .PTR file from the last .QWK packet she successfully downloaded. From the [C]onfigure menu of *Tomcat*, select [R]eset message pointers, then upload the .PTR when prompted. After the upload, the caller will see the following screen:

```
This pointer file is dated 12-18-1991 at 07:46:18.

Do you want to reset pointers [B]efore or [A]fter this pointer file [B/a]?
```

This selection allows the caller to recover a failed download or lost packet, by setting pointers either before or after the previous download.

[S]end your own messages

You have the choice of whether to download messages posted by you, or not. Answer "Yes" to receive mail from you, answer "No" to filter your own messages from the mail packets. This option is not shown for callers with Network status (in other words, a Bulletin Board System calling your BBS to transfer network mail packets.

[N]ew files scan
[I]nclude new bulletins

These two options ask the caller whether to include a list of new files, and a copy of any new system bulletins since her last login. Note that the sysop may disable these functions in *tcMAINT* by toggling New Files or Bulletins to "N".

[M]aximum packet sizes

Callers may set their own maximum packet size, within the limits set by the sysop in *tcMAINT*. This is useful for callers who download mail packets to a floppy disk, or who use a mail reader which reads only a limited number of messages per conference — typically 200.

This option allows callers to select maximum messages per conference, and per download.

[A]ttachment size

Allows *Tomcat* to send files attached to messages as part of the .QWK packet. The user is able to set the maximum size of attached files as follows:

```
Enter maximum attachment size limit in Kbytes [ENTER=no change]:
```

The next prompt asks the caller which file attachments should be sent with the packet:

```
Do you want to include attachments to [A]ll or just to [Y]ou [a/Y]?
```

Note: the handling of attached files, once received, is a function of the caller's .QWK mail reader. In some cases, the caller must manually extract the files from the packet if they are to be saved.

[T]ransfer protocol

Selecting a default protocol in *Tomcat* has the same effect as selecting the default protocol in *WILDCAT!*. Changes made in *Tomcat* will be reflected in your *WILDCAT!* settings.

[P]acker (archiver)

Where more than one type of packer (file compression utility) is offered by the sysop, *Tomcat* will invite callers to select a default packer.

[F]ormat for packets

Tomcat is able to create two types of packets: .QWK packets, for use with an off-line reader or a network mail tosser, and compressed text packets for those callers who are unable to use an off-line mail program.

[G]oodbye after upload

Provides callers with the option to disconnect immediately after their .REP packet has been received.

[H]elp with *Tomcat* configuration

Displays TCONFIG.HLP in the help file path.

[Q]uit back to *Tomcat* main menu

Returns to the *Tomcat* main menu.

Off-line Configuration

Callers have the ability to send control messages to *Tomcat* to make many configuration changes and conference selections using their mail readers.

Callers can add, drop and reset conferences, using the features of their mail reader to generate control messages. *Tomcat* will honor control messages addressed to *Tomcat* or QMAIL, in the following format:

```
Date: 01-27-92 (13:57)          Number: 0
From: GWEN BARNES               Refer#: NONE
To:   TOMCAT                    Recvd: NO (PVT)
Subj: ADD                       Conf: (0) Private
```

[followed by blank message].

This message would add to the caller's scan the conference in the Conf: line of the header.

```
Date: 01-27-92 (13:57)          Number: 24
From: GWEN BARNES               Refer#: NONE
To:   TOMCAT                    Recvd: NO (PVT)
Subj: DROP                      Conf: (24) BetaWMecho
```

This message would drop the named conference from the caller's scan.

```
Date: 01-27-92 (13:57)          Number: 22
From: GWEN BARNES               Refer#: NONE
To:   TOMCAT                    Recvd: NO (PVT)
Subj: RESET 0                   Conf: (22) Beta3rdPar
```

This message would reset the message pointers in the named conference to the number in the Subj: line.

RESET -10	would reset pointers back 10 messages from the top.
RESET 01/01/92	would reset pointers to January 1, 1992.
RESET 10%	would set pointers 10 per cent below the high message number in the conference.

Local Screen Displays

Tomcat displays some additional information on the local screen which is not transmitted to the caller. For instance, when *Tomcat* shells to DOS and executes a packer, the packer will write to the local screen but not to the modem port.

STATUS LINE

Tomcat provides a one-line status bar at the bottom of the local screen, indicating version number, caller's name and security profile, the node number and time remaining for the current call.

FILE TRANSFER WINDOW

The file transfer window is an attractive display with a "gas gauge" status bar showing the progress of the transfer, plus information on port, connect speed, protocol and characters per second.

Advanced *Tomcat* Operations

Local Logins

Tomcat can be run from DOS if desired by the sysop and other users wishing to run it locally, without logging onto *WILDCAT!* first. It requires your user name on the command line, and depending on the "console security" setting in MAKEWILD, may then prompt you for your *WILDCAT!* password before running the door locally.

There are some cautions you need to keep in mind when running *Tomcat* locally. First, you must run it with a valid WCNODEID number that is not currently in use by any other active node. This is critically important with single-line systems as well.

YOU RISK DATABASE CORRUPTION OR SECURITY VIOLATIONS if you use duplicate node numbers. If you own the 'S' version of *WILDCAT!*, or if you are using a multiline version of *WILDCAT!* with the network type specified as 'Single line', you must either run *Tomcat* only as a door while logged on to *WILDCAT!*, or you must take your *WILDCAT!* node DOWN to run *Tomcat* locally from the DOS prompt.

Tomcat allows local logons from the DOS command line in the format:

TOMCAT GWEN BARNES [ENTER] or

TOMCAT SYSOP [ENTER]

If the sysop has set console security in Makewild to "Password" or "No console", *Tomcat* will prompt the user to enter his password before continuing. If the console security is set to "None", *Tomcat* bypasses the password prompt and goes directly to the *Tomcat* main menu.

Local download packets are created in the path defined in *tcMAINT*. If no path is specified, the packet will be created in the node subdirectory below \WC30\WCWORK.

Command Line Switches

Tomcat may be started with command line switches, which bypass the main menu prompts and go directly to the function specified. These may be used in local mode with your user name, or in a batch file.

Running *Tomcat* with command line switches allows you to define extra DOS hook menu prompts in *WILDCAT!* to provide "express line" access to the *Tomcat* functions your callers want. This helps *Tomcat* appear to be even more an integrated part of *WILDCAT!*, if desired. For example, you may define the following menu keys on your message menu:

`[D]ownload mail`

(TOMCAT /DOWNLOAD, using D Download Mail and MAIL.BAT)

`[U]pload mail`

(TOMCAT /UPLOAD, using X DOS Hook 1 and MSG1.BAT)

`[C]onfigure` *Tomcat*

(TOMCAT /CONFIGURE, using Y DOS Hook 2 and MSG2.BAT)

Of course, you would then have to reassign the [U]pdate Conf Scan/Read to another key to avoid conflicts.

Here is a list of valid command line arguments:

/UPLOAD ..... Goes directly to the "Upload" prompt.

/DOWNLOAD ..... Immediately begins scanning for download.

/CONFIGURE ..... Goes directly to the "Configure" menu

/PRESCAN ..... Prescans a packet off-line for later download.

/OVERWRITE ..... Automatically overwrites existing .QWK file, for local operation

/RENAME ..... Automatically renames existing .QWK packet, for localoperation

Prescanning Packets

Network nodes and other regular callers, particularly those calling long distance, might appreciate being able to download a pre-scanned mail packet, rather than wait online while *Tomcat* scans and packs their messages.

To create prescanned packets, you must first designate a prescan packet area in *tcMAINT*. You may select any valid file area in *WILDCAT!*, but we recommend that it be one for which your callers do not have download access, as *Tomcat* regulates access to that area by itself. The prescan files will be password-protected with a random numeric password, and the file names will be scrambled. Prescanned packets, if found, are automatically offered to callers by *Tomcat*; it is neither necessary nor recommended for callers to download prescanned packets from the file menu.

You can create prescanned mail packets during a system event by calling *Tomcat* from a batch file with the following syntax:

```
TOMCAT [USER NAME] /PRESCAN
```

where [USER NAME] is the name your caller uses to log onto the BBS.

Tomcat will then scan and pack a mail packet, and store it in the *WILDCAT!* file area you designated in *tcMAINT*. If a prescan packet exists, the caller will be prompted to download or delete it. When the caller has successfully downloaded the prescanned packet, *Tomcat* will delete it.

If a prescanned packet for a caller already exists when *Tomcat* is called with the /PRESCAN argument, *Tomcat* will skip the prescan, and note this in the activity log. This is to prevent callers from losing mail if they do not pick up their prescanned packet.

Multi-node Configurations using TCNODE.CFG

This file, if it exists in your node directory, will override the main \WC30\TOMCAT.CFG with node-specific settings. This is useful if you need, for example, to specify a local drive or a RAM drive for *Tomcat*'s work directory rather than a network drive.

This file is in the same format as TOMCAT.CFG, and can be created by copying TOMCAT.CFG to each node directory. Using a plain ASCII text editor (for example OLXED.EXE, supplied with Off-Line Xpress), you may then make changes to the config for each node. TCNODE.CFG should contain ONLY the lines which override the main TOMCAT.CFG settings — the rest should be deleted.

The file is in a straightforward KEYWORD=ARGUMENT layout, and should be readily understandable.

Here is one example of a TCNODE.CFG which overrides the default local directory and work directory on a network node which has a local C: drive. This would create QWK packets on a local drive rather than on a network drive, and would speed up packet assembly by creating packets on the local drive as well.

```
LOCAL = C:\QMODEM\OLX
WORK  = C:\TC$WORK
```

Since these are the only two items which differ in the configuration from the main TOMCAT.CFG, this is the only information this file needs to contain.

Sending Fido Netmail messages

Tomcat now supports Fidonet addresses on messages entered off-line in a "Netmail" conference. First of all, the conference type must be defined in MAKEWILD as "Netmail". Secondly, the first line of the message must conform to the following format:

```
->z:net/node.point
```

Here is an explanation of each part of the address string:

-> ..... this is the "Routing symbol", consisting of a hyphen character followed by the [SHIFT] [.] or [>] characters.

z: ..... This is the Fidonet zone number

net/ ..... This is the three-digit Fidonet net number followed by a forward slash or [/] character.

node. ..... This is the Fidonet node number.

.point ..... (optional) This is the point number.

A typical Fidonet address might be 1:210/10. Messages routed to this address would be sent to the Dew Drop Inn BBS, operated by MSI technical support analyst Herb Dunn.

Off-Line Xpress (OLX)

Please encourage your callers to try Off-Line Xpress. This full-featured QWK packet reader from MSI works well with *Tomcat*, and allows a wide range of configuration options in a well-designed, easy to use interface. Nearly every aspect of the program can be customized, from screen colors to "taglines".

We've designed OLX to be easy and fun to use. It comes with a tutorial in the form of a specially prepared QWK mail packet which guides first-time users through the basic features and options they'll use when reading off-line mail. Advanced users will enjoy the power and speed of OLX, too.

Off-Line Xpress is full of useful and timesaving features. It offers full mouse support, online help, and a simple built-in text editor, which can be replaced with the editor or word processor of your choice. You can search for multiple strings of text in a message packet, and use advanced pick list options for repetitive tasks such as mailing lists and saving messages to disk.

While OLX is designed as a serious productivity tool, we've included some other features to make mail reading fun and enjoyable. We'll leave it to you to find the puzzle game our programmer included in Off-Line Xpress . . . meanwhile you can make full use of OLX's single-keystroke tagline stealing function.

A Test Drive version of Off-Line Xpress is available for download from MSI HQ BBS at 805-873-2400. The Test Drive version may be freely distributed.

The fully registered version of Off-Line Xpress can be purchased from MSI for $40. Call our sales hotline at 1-800-999-9619 to order.

Connecting *WILDCAT!* to Net/Echomail

WILDCAT! is capable of providing links to a variety of NetMail and EchoMail systems. One of the most common and widely known is Fidonet, an international network of personal computers organized and set up by Tom Jennings a number of years ago. It is an all-volunteer network and literally covers the globe.

A number of other options are also available to the *WILDCAT!* sysop who wishes to exchange public and private electronic mail with other Bulletin Board Systems. Two programs, *Tomcat* and TNet, are provided with *WILDCAT!* to provide another means of connecting with other BBSs. Their installation and use is discussed later in this chapter. First, however, we'll discuss briefly how *WILDCAT!* interfaces with networks using Fidonet technology.

Fidonet

In order for *WILDCAT!* to recognize and communicate with an external mail network using Fidonet technology, the sysop must make use of a "Front-End Program." This program is used to answer the phone in place of *WILDCAT!* in order to determine if a call is intended for the mail system or is a BBS caller. Calls from other NetMail systems with message traffic are processed by the Front-End Program, while BBS callers are passed on to *WILDCAT!*. The newly received messages can be placed directly into appropriate message conferences for reading by the BBS callers.

NetMail messages may be public or private, and are usually addressed to a person at a specific BBS or dedicated mail system. Although private messages are supported by some networks, the privacy of the material is not guaranteed. The addressing scheme used for NetMail (FidoNet only) consists of a Region number, a Net number, and a Node number in the format 1:210/10 (the address of the Dew Drop Inn, in Bakersfield, CA). If Fido Style NetMail is to be implemented the conference mail type *must* be set to Netmail in MAKEWILD.

EchoMail is slightly different from NetMail. It consists of a series of public messages gathered from many other BBS and mail systems across the country who share a common message topic, such as the International *WILDCAT!* Echo. Each night new messages from every system are sent to all others (via several links), and each system receives the new messages from every other participant in the echo. All echo members end up with a common message pool which is kept current within a few days. Echo messages are usually all public.

In order for a front-end program to pass control to the BBS when a non-mail call is received, there must be a method of informing *WILDCAT!* of the caller's baud rate. This is accomplished through the use of a command line argument in the format:

```
WILDCAT /B 1200
```

The baud rates acceptable are 300, 1200, 2400, 9600, 19200, 38400 and 57600. If the caller is making use of a "reliable" connection, one using MNP, ARQ, or other hardware error control, this number should be immediately followed by the letters MNP. If the baud rate is passed on the command line to *WILDCAT!*, it will connect to the already existing caller and begin the login process. After the call is completed

WILDCAT! automatically exits, returning control to the front-end program. This automatic exit *always* takes place when *WILDCAT!* is started with the /B command line switch.

Another option supported in the /B command line parameter is passing the number of minutes until the next mail event scheduled by the front-end program. Mail events are commonplace and *must* take place at the scheduled time. *WILDCAT!* uses this number to adjust the caller's time allowed on the system during his call, and treats it like a hard event (see events for hard event definition). The format for passing the time along with the baud rate is an integer which follows the baud rate, delimited by a space:

```
WILDCAT /B 2400MNP 65
```

The above example indicates that the caller being passed to *WILDCAT!* is connected at 2400 baud, is using MNP (or similar) error control, and the front-end mailer needs to begin a mail processing event in 65 minutes. The time parameter is treated as a hard event by *WILDCAT!* to ensure it is observed.

The specifics of NetMail and EchoMail operation are far beyond the scope of this document. Each front-end program operates differently, many requiring complex batch file setup by the sysop. Mustang Software's technical support is unable to assist with specifics of any particular interface problems with a front-end mailer.

The message packets received and sent by four front-end mailers can be imported to *WILDCAT!*, **BinkleyTerm**, **Front Door**, **InterMail** and the **D'Bridge** Electronic Mail System. The packets received by these systems can be placed into message conferences for reading inside *WILDCAT!* and messages entered in these *WILDCAT!* conferences can be exported for routing by the mailers.

A *WILDCAT!* compatible mail "tosser" program is required to move messages in and out of the BBS. At the time of this writing, two such programs were available, **Wildmail and Gomail.** These "tossers" are written by 3rd party developers and are distributed as shareware programs. They are available through BBS systems including the MSI HQ BBS. Additional tossers may also be available through other vendors.

Sysops interested in setting up a NetMail or EchoMail system using Fidonet technology should call the *WILDCAT!* HQ BBS and download the necessary front-end shareware programs. Information, suggestions, and recommendations as to which programs are best for your implementation is available in the NetMail message conference.

Mustang Software cannot assist in choosing a front-end program, but can sometimes help with the interface of the mailer and tosser with *WILDCAT!*. We cannot offer extended technical support for front-end program installation and configuration.

QWK-REP Network mail

One of the more interesting and useful applications for BBS communications is the ability for one Bulletin Board System to exchange public messages and electronic mail with other systems. These networks can be small and private, such as a link between BBSs belonging to branch offices of a corporation, or they can be large public networks allowing many hobby systems to share messages locally, regionally, or even worldwide.

QWK/REP mail, developed originally by Mark "Sparky" Herring, is the system of choice on a growing number of BBS networks, and is the mail system supported by *Tomcat* and TNet. It adheres to a published, documented file format, and has the advantage of being supported by many third-party authors and BBS software programs. A wide selection of mail readers, mail doors, and message import/export utilities are available. TNet fully supports QWK/REP network mail for *WILDCAT!* and is compatible with RNet and QNet for PCBoard, and similar products for many other BBS software platforms.

Network Topology and Administration

BBS networks usually have a 'tree' structure. Here's an example of a fairly typical setup:

```
                          NET HUB
                             |
 +----------+--------------+--------------+----------+
 |          |              |              |          |
NODE       NODE       REGIONAL HUB      NODE   REGIONAL HUB
                             |                        |
                      +---------+                  +---------+
                      |         |                  |         |
                     NODE      NODE               NODE      NODE
```

A net hub would not call any other BBSs for mail; a regional hub calls the net hub to upload and download mail, and has nodes calling the regional to upload and download mail. Nodes call the net hub or regional hub only; they do not have any other boards calling them for mail.

Real networks might have more or fewer levels in the tree. Every additional level means an extra time lag for messages to find their way up the tree to the net hub and back down the tree to the other nodes, and the most efficient topology is a subject of considerable debate and experimentation.

Processing Mail, Step by Step

Here's how a typical network mail transaction works, from the point of view of a network hub:

You've set up a user account in *WILDCAT!* for a node called "BSCI BBS" with a security profile of NETSYSOP (or another security profile with net status toggled on in *tcMAINT*). Delbert, the sysop of BSCI BBS, now logs on as "BSCI BBS", enters the mail door and uploads the reply packet he prepared before calling. This reply packet consists of new messages exported from his own BBS, which *Tomcat* unpacks and inserts into your message file.

His last action is to download a new QWK packet for import into his BBS. Delbert then disconnects from your BBS, and processes his newly-received mail packet with TNet if he operates a *WILDCAT!* BBS, or its equivalent if he operates some other type of BBS software. The messages are inserted into the BSCI BBS message file(s), then Delbert restarts his BBS, and waits for the next mail processing event to roll around.

Just before Delbert's next call, he exports all the new mail he and his callers have left on his BBS into a REP packet, using TNet. Export complete, he calls your BBS again, enters the *Tomcat* mail door, uploads the replies, and downloads a fresh QWK packet.

Finally, here is the typical procedure a node sysop would follow in creating and running a network mail event:

1. Export new local mail.

Prepare a [hubname].REP packet ready to upload to your host by running:

```
TNET EXPORT [hubname]
```

TNet will call the config file matching the hubname. Do not add the .CFG extension to the hub name.

TNet will then log its activity to the console and to the log file specified in [hubname].CFG. TNet will create [hubname].REP in the directory specified in the config file. It should be the directory in which Robocomm or your communications script expects to find the .REP file.

2. Collect new mail from your host.

Call your hub, enter the mail door, upload your .REP packet, and then download a .QWK packet. Please remember to rename or delete the .REP packet after it has successfully been uploaded so you don't upload it again.

The order in which you upload and download packets on your host is not critically important, but there are some factors which should be considered when doing a mail run. Most mail doors will allow you to upload a reply packet, then drop carrier as soon as the door indicates the packet has been successfully received. For this reason, doing the download first, then uploading and dropping carrier may save a few seconds on a long distance call, particularly if you are uploading large reply packets.

On the other hand, phone line conditions in the real world may make this impractical — if your packet download is subject to line noise hits and even disconnection, it may be better to upload your replies first to ensure they make their way into the network, then make whatever attempts are necessary to get an inbound QWK packet. If the download fails, the messages will still be on the host BBS for you to try again on your next call, but you know that your replies, at least, are now on their way to their destination.

3. Import new incoming mail.

Import the newly downloaded messages into your BBS by calling TNet with the following parameters:

```
TNET IMPORT [hubname]
```

TNet will extract and index the .QWK packet you just received, and insert the messages into your database. A full report will appear on the local console and will also be logged to a disk file, if you have TNet's logging option turned on.

4. Cleanup and restart the BBS.

Rename or delete your old .QWK and .REP packets, to prevent duplicate messages from re-entering the network. Then restart your BBS.

Tomcat Network Mail Operation

Tomcat generates net status QWK packets recognized by TNet and other QWK-REP mail tossers capable of correctly recognizing a net status mail packet. This allows *Tomcat* to be used as a network mail "hub", allowing other Bulletin Board Systems to share your message base.

QWK/REP is the mail system supported by *Tomcat*. It adheres to a published, documented file format, and has the advantage of being supported by many third-party authors and BBS software programs. A wide selection of mail readers, mail doors, and message import/export utilities are available. *Tomcat* fully supports QWK/REP network mail for *WILDCAT!* and is compatible with Tnet, RNet and QNet.

Here's how a typical network mail transaction works: Imagine yourself as the "hub" of your own network, with one or more "nodes" calling for mail.

You've set up a user account in *WILDCAT!* for "Fred's BBS" with a security profile of NETSYSOP (or another security profile with net status toggled on in *tcMAINT*). The sysop of "Fred's BBS" now logs on, enters the mail door, and downloads a QWK packet.

After Fred successfully downloads a packet, he now uploads the reply packet he prepared before calling. This reply packet consists of new messages exported from his own BBS, which *Tomcat* unpacks and inserts into your message file.

The sysop then disconnects from your BBS, and processes his newly-received mail packet with RNet or QNet (if Fred's BBS is running PCBoard software); TNet if he operates a *WILDCAT!* BBS. The messages are inserted into Fred's BBS message file(s), Fred the sysop restarts his BBS, and waits for the next mail processing event to roll around.

Just before Fred's next call, he exports all the new mail he and his callers have left on his BBS into a REP packet, using RNet, TNet or QNet. Export complete, he calls your BBS again, enters the *Tomcat* mail door, uploads the replies, and downloads a fresh QWK packet.

Net Status

By default, *Tomcat* sends net status mail packets to callers whose security profile is NETSYSOP. You may assign net status to other security profiles by toggling them in *tcMAINT*. You should only assign net status to security profiles which will actually be transferring network mail, as off-line mail readers are frequently unable to open mail packets generated by *Tomcat* in net status mode. Also, assigning net status where it is unnecessary causes network tagging and routing problems.

Net status is granted in ALL message conferences accessible to a given security profile. If you do NOT want certain message areas on your BBS echoed to other systems, do NOT include them in the conference access portion of that security profile!

Network User Database

Under ordinary circumstances, *Tomcat* will only send private mail addressed to user names matching the user name of the caller downloading the mail, unless that caller has sysop access. This makes network transfers of private messages awkward, as it would be necessary for a network mail caller to have access to ALL the private mail on your system in order to transfer private mail to his own users.

Tomcat solves that problem by keeping a database of user names. If a caller on another BBS enters a message, and that message is uploaded to *Tomcat* by a net status caller, *Tomcat* records the caller's name and the user name of the originating node.

For instance, if a caller named PHILL TERRY posts a message which is then uploaded to MSI HQ BBS in a REP packet by a net status caller named GPL BBS, Phill's name and the name of the net status caller would automatically be recorded in the network user database, along with the node his message originated from. If a caller leaves a private message for Phill Terry on the MSI HQ BBS, *Tomcat* will add that message to the next net status QWK packet downloaded by GPL BBS.

tcMAINT gives sysops the ability to view and edit names in the network user database, if desired. This may be useful if you need to enter names into the database before the connecting node has made a transfer, or if you need to delete names or nodes from the database.

TNet

TNet allows you to exchange mail with any BBS which uses a QWK-compatible mail door capable of producing "net status" mail packets. TNet extracts outgoing mail from your message base and creates a reply packet that you upload to your host's mail door. You then download a "net status" message packet from your host, and import the new mail into your BBS message base with TNet.

When properly set up and organized, this process can take place as a scheduled event within your BBS, and requires relatively little maintenance or intervention on your part.

Installation

TNet is relatively straightforward to install and configure. However, network mail should be considered an advanced topic of BBS operation, and requires a thorough understanding of the concepts if you hope to use this program successfully. As such, there is no "Quick Installation" process for TNet, and you should not attempt to run this program until you have read, and understand, the documentation.

Here is the installation procedure, step by step:

1. First, make a backup of your BBS files.
2. If you have not already done so, use the WINSTALL program on your "Install" disk to install the program on your hard drive by selecting "Install *Tomcat* and TNet".
3. Read this chapter fully. You will need to refer to it often during the initial setup and operation of your TNet network mail system.
4. Create your [hubname].CFG files

Your next step is to create a [hubname].CFG file, using a text editor capable of saving files in plain ASCII format. Most of the information TNet requires at runtime is read directly from *WILDCAT!*'s data files, with the remainder of the necessary information supplied by [hubname].CFG.

TNet Configuration Files

TNET.CFG (optional)
[hubname].CFG (required)

TNet looks for two configuration files when it starts up — TNET.CFG and [hubname].CFG where [hubname] is the hub identifier specified on the TNet command line. Any options in [hubname].CFG will override the corresponding option in TNET.CFG. This is useful if you call more than one hub for network mail — the general options can be stored in TNET.CFG while the BBS-specific conference configuration information can be stored in individual hub configuration files.

TNet uses a plain ASCII text file for its configuration information. It uses a set of keywords and options for defining conference numbers, paths to message packets, taglines, public/private mail, high message pointers, etc. The name of this file must match the "packet name" generated by your host's mail door (i.e. to process BIGBBS.QWK packets, you need a configuration file named BIGBBS.CFG).

The following is a brief explanation of the keywords available in TNet's configuration file. A more complete explanation is provided under the TNet Command Reference section.

Keywords marked [R] must be present in the CFG file; all others are optional and have suitable default values. TNet will ignore all lines beginning with a semicolon. Each keyword must be on a separate line. Spaces and indents make the configuration files easier for humans to read, but are ignored by TNet.

Keyword	Default	Function
SYSTEM	= [R]	Type of your BBS system (WILDCAT2 or WILDCAT3)
WORK	= WORK	Work directory used by TNet
QWKDIR	= current	Directory to find QWK packets
REPDIR	= current	Directory to place REP packets
LOGFILE	= None	Name of log file
PACKER	= PKZIP -es !, PKUNZIP -o !	Specify command lines for packer/unpacker
APPEND	= N	Append exported messages onto existing REP packet

Keyword	Default	Function
ATFILTER	= Y	Filter "@-variables"
VERBOSE	= N	Verbose log file entries
TTAG	= Y	Include the words "TNet 3.x" in tagline
ATTLIMIT	= 0	Maximum size in bytes of attached files to be sent in REP packet.
TCAN	= Empty	"Trashcan" – specify user(s) to exclude
PRIVNAME	= Empty	Username for which private messages are always exported
TRANSLATE	= Empty	Translate names
IMPTRANS	=	
EXPTRANS	=	
LOCSYSOP	=	
HUBSYSOP	=	
IMPORTTAG	= None	Tagline definition for imported messages
EXPORTTAG	= None	Tagline definition for exported messages
CONF	= [R]	Your local conference identifier
HUBNUM	= [R]	Your hub's conference number for above conference
PRIVATE	= N	Allow private messages in this conference
TAG	= None	Tagline letter for this conference
NEXTMSG	= [R]	Next message number to be exported by TNet

TNet Command Reference

TNet should always be run from your *WILDCAT!* home directory (the one that contains MAKEWILD.DAT). It must be run with a unique WCNODEID= setting, or you will defeat the file locking mechanism and corrupt your *WILDCAT!* databases. If you are running the single line version under DESQview, you MUST bring down *WILDCAT!* before running TNet. If you are using the Autonode feature on a multiline system, TNet will find a free node number to use.

Command Line Switches

TNet can be run from the DOS command line, or from a batch file. Its command line format is the same in either case:

```
TNET [EXPORT|IMPORT|HIGH] [hubname]
```

EXPORT—This command will tell TNet to extract all new mail from your message database and place it in a [hubname].REP packet to be uploaded to your hub.

IMPORT—This command will tell TNet to extract a QWK packet and insert all the messages in it into your message database.

HIGH—This command will tell TNet to set the message number in each conference listed in the .CFG file to the highest message number in the corresponding conference on the BBS. If you renumber your message base, you must use the HIGH command to tell TNet to reset all message pointers to the highest message in each conference, since the numbers will have changed. Just remember to do one last export before renumbering, as no messages will be exported immediately after running HIGH!

Keywords

A TNet configuration file is a plain ASCII text file consisting of keywords, arguments, and optional comments, in the following format:

```
KEYWORD = OPTION
KEYWORD = OPTION1, OPTION2 ; COMMENT
```

etc.

Note the use of the equals sign as a delimiter between keywords and options, and the comma to indicate additional options where required. Any text following a semicolon is treated as a comment line, and is ignored by TNet.

TNet looks for two configuration files when it starts up — TNET.CFG and [hubname].CFG where [hubname] is the hub identifier specified on the TNet command line. Any options in [hubname].CFG will override the corresponding option in TNET.CFG.

SYSTEM—This option must be set to WILDCAT3 or WILDCAT2. No other system types are supported.

WORK—This specifies the directory where TNet will place its work files. Make sure there are no files in this directory that you want to keep, because they will all be deleted as part of normal operation! By default, TNet will use WORK. You may specify another directory if you wish, or even a RAM drive for faster processing, so long as there is no possibility of another program or *WILDCAT!* node sharing the same directory during runtime.

QWKDIR—This specifies the directory where TNet will look to find QWK packets. This should generally be the same as the directory where your communications program places downloaded files. The default is the current directory.

REPDIR—This specifies the directory where TNet will place REP files to be uploaded. Make sure your communications program looks to this directory when uploading files. The default is the current directory.

LOGFILE—This specifies the file name where TNet will place a log of all network operations. This file is never deleted by TNet, so you will need to delete or archive this file periodically, as it can grow quite large, especially with the verbose logging option.

PACKER—This is the command line TNet will use when packing and unpacking mail packets. The example provided in the default TNET.CFG file supplied with this program should normally be left as is, unless you have a good reason for changing it.

APPEND—When this option is set to Y, TNet will always append newly exported messages on to the end of an existing REP packet. When set to N (the default), TNet will always start a fresh REP packet whenever it exports mail, even if one already exists. Keep this option in mind when testing or running TNet outside a system event. You could overwrite your REP file!

ATFILTER—When this option is set to Y, TNet will remove all @-variables of the form @STRING@, remove PCBoard @X color codes, and translate the "escape" character used in ANSI control strings to ' (reverse quote). PCBoard, *WILDCAT!*, and other BBS software use @-variables as substitution variables. Since their effect is unpredictable in messages, their use generally leads to confusion when used in a network environment. We recommend leaving this option as Y.

VERBOSE—When this option is set to Y, TNet will detail the To, From, and Subject lines of each message in the log file. Otherwise, just the conference summary totals are placed in the log file.

TTAG—Normally TNet identifies itself in all taglines appended by TNet. When this option is set to N, TNet will suppress the "TNet 3.5" part of the tagline.

ATTLIMIT—This is a numeric option, and sets the maximum size in bytes of any files attached to messages, which would be sent to another system via TNet.

TCAN—You can specify names of certain users whose messages you do not want imported or exported by TNet. Messages both To and From such users will not be moved. Note that return receipts generated by *WILDCAT!* Mail Room (if applicable) will never be exported into the network.

PRIVNAME—If you have set a particular conference in [hubname].CFG to "N" for private messages, but still want private messages from certain users to be exported, you can use this option to specify their names. Messages from users listed in the PRIVNAME section will always be exported regardless of the PRIVATE setting in each [hubname].CFG conference definition.

TRANSLATE—TNet has the ability to translate user names on imported messages, exported messages, or both. Use these options with caution, and ONLY if absolutely necessary!

There are five forms of translates:

```
TRANSLATE = localname,hubname
```

This option will translate all occurrences of "localname" in exported messages to "hubname," and all occurrences of "hubname" in imported messages to "localname".

```
IMPTRANS = localname,hubname
```

This option will translate all occurrences of hubname to localname in imported messages ONLY.

```
EXPTRANS = localname,hubname
```

This option will translate all occurrences of localname to hubname in exported messages ONLY.

```
LOCSYSOP = yourname
```

This is the same as TRANSLATE = SYSOP,yourname. Use this option ONLY if you use the name SYSOP on your BBS instead of your real name.

```
HUBSYSOP = hubsysopname
```

This is the same as TRANSLATE = hubsysopname,SYSOP. Use this option ONLY if your hub sysop uses the name SYSOP instead of his or her real name.

IMPORTTAG/EXPORTTAG—Since your hub's QWK mail door may not "tag" outgoing messages with their origin tagline, TNet must tag them during import to identify their source. This option is used to specify a tagline letter and tagline text for imported messages. For example:

```
IMPORTTAG = T, Your Hub BBS Name and Phone Number
```

identifies tagline type T as the above tagline text. Then for each conference which specifies tagline type T, the above tagline text will be placed at the bottom of imported messages if necessary.

```
EXPORTTAG = T, Your BBS Name and Phone Number
```

This is the tagline definition for exported messages. The tagline letter and tagline text are specified in the same way as in the IMPORTTAG option. In this case, the tagline text should identify your BBS name and number so that outgoing messages can be properly identified.

CONF—This is the conference identifier to which the following four options will apply.

Conference identifiers in *WILDCAT!* 3.x are numbered 0 through 999 (or whatever is the maximum number of conferences you have set in Makewild).

HUBNUM—This is the hub conference number which corresponds to the above conference. Note that if your hub is a *WILDCAT!* 2.x system using *Tomcat*, then A through Z are accepted as substitutes for 0 through 25, where A=0, B=1, and so forth.

PRIVATE—This yes/no option indicates whether or not private messages in this conference are exported by TNet. Note that if a message is from a user specified in the PRIVNAME section, it will always be exported regardless of this setting.

TAG—This is the tagline letter for this conference. See the description of the IMPORTTAG and EXPORTTAG options for more information.

NEXTMSG—This is the next message number to be exported by TNet. This option is automatically maintained by TNet and should not be changed under normal circumstances.

The following is a sample [hubname].CFG configuration file:

```
SYSTEM      = WILDCAT3
WORK        = C:\WC30\WCWORK\NODE1\TEMP
QWKDIR      = C:\QWK
REPDIR      = C:\REP
LOGFILE     = TNET.LOG
PACKER      = PKZIP -es ! , PKUNZIP -o !
APPEND      = Y
ATFILTER    = Y
VERBOSE     = N
TTAG        = Y
TCAN        = BOTHERSOME USER
PRIVNAME    = GREG HEWGILL
IMPORTTAG   = T , Hub BBS Name and Phone Number
EXPORTTAG   = T , Your BBS Name and Phone Number

CONF        = 5 ;This comment is local conf name
 HUBNUM     = 105 ;This comment is hub conf name
 PRIVATE    = Y
 TAG        = T
 NEXTMSG    = 0

CONF        = 6
 HUBNUM     = 106
 PRIVATE    = N
 TAG        = T
 NEXTMSG    = 0
```

Network Sysop Message Support

TNet supports "network sysop" messages. These are messages that will appear as a personal message to each sysop on a network.

If, when importing a message, the message has a subject that begins with !NS! and the message is to ALL or NETWORK SYSOP, then the message will be posted to the sysop in addition to being posted normally. Depending on the BBS type, "posted to the sysop" will mean different things.

If, when importing a message, the message has a subject that begins with !NS! but the message is NOT to ALL, then the subject is changed to start with (NS). This is so that, as replies to an !NS! message drift back up the network, their subjects are modified from !NS! to (NS).

Appendix A - Modems

A computer and the supporting peripherals that constitute a bulletin board system represent a chain of equipment that rarely gets to rest.

Even while idle, the system is working. Most BBS's are on call twenty-four hours a day, seven days a week. A BBS system's modem is the most important link to the outside world. We strongly recommend purchasing a name brand modem that has proven itself a reliable performer under long term use.

Mustang Software regularly solicits modems from manufacturers during our program development, with the understanding that *WILDCAT!* will be tested and guaranteed to run on their equipment. We continue to add modem settings to our list as new manufacturers cooperate with demonstration units for testing. Our thanks to those who have participated in this evaluation program.

Fine Tuning Considerations

With the advent of nonvolatile RAM to save modem configurations, most modems can be set up once and left alone. These modems with NRAM need very little in the way of initialization strings in the MAKEWILD configuration. Getting the right information programmed *can* be a difficult obstacle, especially if your modem manual is written from an extremely technical perspective.

This section is designed to review the configuration items to look for when reading your own modem manual, and to help make a decision as to which settings are correct for your BBS operation.

Modem Switch & Register Settings

The settings for any individual modem may vary, but most modems make use of some standard switch and S-register settings. The discussion here deals with the most common dip switch choices (if your modem has them) and the register settings. The switches, if present, may be arranged and numbered in any order, but will usually cover the following functions. If your modem has switches you should set them according to this discussion.

Data Terminal Ready (DTR)—One of the pins on your cable or connection between your computer and modem is DTR, which is used to assure that the two can "talk" to each other. *WILDCAT!* handles the operation of DTR and uses it to control the connection. One of the main uses for DTR is to tell the modem that a caller has

pressed G for goodbye and wants to hang up. This switch can usually be either *forced on* or *normal*. *WILDCAT!* needs a *normal* setting in order to be able to raise and lower DTR to tell the modem when to hang up the phone.

Verbal/Numeric Result Codes—This switch controls the type of responses the modem sends to the computer for connect, ring detected, etc. The two choices are Verbal (also called verbose) or Numeric (also called terse). *WILDCAT!* must receive *verbal*, the default for most modems. The command equivalent is usually V1.

Display Result Codes—This switch indicates if the response from the modem should be sent to the computer. *WILDCAT!* needs to get the numeric codes and therefore this switch should be set to *enable* result code display. The command equivalent is usually Q0.

Command Mode Local Echo—Local echo refers to the ability to actually display the result code to the screen locally when it is sent. *WILDCAT!* does not require this echo in order to operate properly. The command equivalent is usually E0 to disable echo.

Auto Answer—The preferred method for *WILDCAT!* to use in answering the phone is by monitoring the Ring Detect Line, rather than having the modem auto answer the phone. The auto answer switch should be set to disable auto answer. If instead you elect to answer the phone by auto answer (in MAKEWILD), this switch must be set to have the modem perform auto answer. The status of this switch can be overridden with S0=0 to disable auto answer or S0=1 to enable it.

Carrier Detect Override (DCD or CD)—This switch is *very* important. *WILDCAT!* monitors pin 8 to determine whether a carrier exists to know if someone is online. If this switch is set incorrectly, *WILDCAT!* cannot tell when someone hangs up, and may think someone is online when they are not. It should *not* be forced true or forced on. *It must be set to reflect reality or to follow software*. If *WILDCAT!* is started with CD forced true it will display the message "Modem Carrier Detected; must lower to initialize. Tries: 1...", and will retry several times.

Single/multiple phone line—This can be set either way depending on your phone line.

AT command set recognition—Since *WILDCAT!* sends and receives AT commands to and from the modem, this switch must be set to *enable* AT command set recognition.

Escape Code Operation—It is advised that your modem disconnect if it receives a +++ from your caller. Not all modems have this switch. To prevent acting on an escape sequence, we recommend including the command S2=255 in a modem string to change the escape code character from +++. See the discussion of the S2 register below, and in your modem manual.

Use Factory or NRAM defaults—Some modems that allow storing setup parameters in nonvolatile RAM (NRAM) also allow selection of whether the power on default parameters are loaded from NRAM or the factory settings. If your modem allows a choice you must set this switch to *load from the NRAM settings*, not the factory settings. The USR HST is one modem which has this dip switch.

S0 register—This register sets the ring number to answer the phone. If set to 0, (zero) auto answer is disabled. S0=1 will enable auto answer on the first ring.

S2 register—This register holds the ASCII value of the escape sequence character. The factory default is 43, the plus sign (+). The character indicated in S2 needs to be sent 3 times with appropriate pauses to place the modem in command state. Values above 128 disable the escape sequence. We recommend disabling the escape sequence since it is not needed by *WILDCAT!*, and will prevent troublesome callers from attempting to disable your modem.

S7 register—This register value determines how long the *modem* waits for a carrier to be detected after it has answered a call. It should normally be set to the default of 30, and must match the value in MAKEWILD for *WILDCAT!* to wait before giving up in *Modem Setup - Part 1, question 2*.

S25 register—Not all modems have this register, but it is important if it exists. A change in the DTR (data terminal ready) status from on to off that is shorter than S25 is ignored. This value is usually entered in tenths of a second. This means that a value of 5 (five tenths of a seconds, or half a second) represents the shortest time that DTR must be lowered to have the modem hang up. You may recall that *WILDCAT!* uses a lowering and raising of DTR to end a call, and we expect the modem to respond. If it doesn't it could be due to this register being set too high. The time DTR is lowered by *WILDCAT!* is configurable, and can be tested using *wcMODEM*.

Locked Communications Ports

If you have elected to lock the DTE (link between the modem and the PC) at the initialized rate of 9600—38400, you may need to tell the modem that the DTE rate is fixed and cannot change. The command for this varies from modem to modem. The USR HST models use &B1 to indicate a locked DTE and &B0 to allow it to change with the actual connect rate (DCE). The Hayes high speed modems do not require any command, while many other V.32 modems require \J0.

DTE vs. DCE Result Codes

When locking your communications port at a higher rate than the connect rate (DCE), the modem needs to know which rate to return in the result code. Most will return the locked DTE rate by default, and need to be told to return the DCE, the actual connect

rate of the caller. The Hayes high speed modems make use of the W2 command to request a DCE based result code while the USR returns the DCE automatically if the rate is locked and &B0 is set.

Negotiation Progress Messages

In light of all the possible error correction protocols, modulation protocols and data compression protocols available, a wide range of verbose result codes are possible. These include MNP, LAP-B, V.32, V.42bis and many variations in terminology. Although *WILDCAT!* has provisions in MAKEWILD and .MDM files for recording every possible code representing hardware error control, some modems allow easy reporting of all error control situations with a single result code appended to the connect message. Hayes high speed modems use the S95 register for this function. Setting S95=2 appends /ARQ to all connect result code messages if a hardware error control protocol is detected. Other modems may have a similar setting.

Troubleshooting

Should you have trouble with your modem operating properly after installing and checking the setup parameters, you should follow these steps to determine the problem area.

First, start *wcMODEM* and select Initialize Modem Port from the menu. Enter the correct Port #, Port IRQ, Base address and Baud rate and press F10 to Open the port and return to the main menu. Select Terminal mode.

Second, type ATZ. You should see "OK" or its numeric equivalent "0", which indicates you have established a good connection to the communications port. If this test fails, you need to check your hardware to make sure the port you have selected exists and is the *only* port with that designation (COM1 etc.). If you got the "OK" then proceed with the following step.

Third, enter the startup strings listed in your MAKEWILD configuration one at a time to see if the modem is interpreting them correctly. For example, if your modem calls for AT V1 M0 Q0 E0 you would type

AT V1 [ENTER]

The result should be either OK or 0 (ZERO). If you get 0, the numeric equivalent of OK, you should type AT V1 to place your modem in verbal result code mode. Next type AT M0 [ENTER] and see if you get OK. Continue to test each setup parameter until you are sure that your modem accepts each one. Perform this test for EVERY command in your startup string, as well as the reinitialization string, if being used. Should all of them be accepted by your modem but it still fails to

operate properly, you should increase the modem delays in MAKEWILD to 2500 each in increments of 500. If any individual setup string item fails, check your modem manual and make sure the parameter is a valid command.

See the complete documentation for *wcMODEM* for instructions on using terminal mode if needed.

Appendix B - ANSI Codes (colors only) and DOS Colors

	ANSI CODE	DOS COLOR #
Erase display	ESC [2J	
ALL ATTR. OFF	ESC [0m	
BOLD ON	ESC [1m	add 8 to color #
UNDERSCORE ON (IBM Mono ONLY)	ESC [4m	
BLINK ON	ESC [5m	add 128 to color #
REVERSE VIDEO ON	ESC [7m	
CANCEL ON (invisible)	ESC [8m	
FOREGROUND		
BLACK FG	ESC [30m	0
RED FG	ESC [31m	4 (bold = 12)
GREEN FG	ESC [32m	2 (bold = 10)
YELLOW FG	ESC [33m	6 (bold = 14)
BLUE FG	ESC [34m	1 (bold = 9)
MAGENTA FG	ESC [35m	5 (bold = 13)
CYAN FG	ESC [36m	3 (bold = 11)
WHITE FG	ESC [37m	7 (bold = 15)
BACKGROUND		
BLACK BG	ESC [40m	
RED BG	ESC [41m	
GREEN BG	ESC [42m	
YELLOW BG	ESC [43m	
BLUE BG	ESC [44m	
MAGENTA BG	ESC [45m	
CYAN BG	ESC [46m	
WHITE BG	ESC [47m	

Additional ANSI codes are also available for cursor movement and other functions. *WILDCAT!* @ Color codes are listed on the back cover of the manual.

Appendix C - Common Questions & Answers

Setting up a bulletin board program isn't always an easy task. Due to the complex configuration necessary involving the modem, computer and program, the end result is often not achieved the first time. If you are having difficulty the following section may be of help.

Q When I try to log in, the system tells me I don't have access to that node. Why not, I'm the sysop?

A Each security profile in *WILDCAT!* can be limited to calling only certain lines. Even in a single line system, each profile can be extended or denied access to the node. Check your Security Profile Definition screen and make sure that each security profile has access to each node (under node access).

Q When someone logs in they get a message saying the security profile doesn't exist.

A Most likely, you have changed the name of a security profile *after* assigning users to it under the old name. You cannot simply change the name under these circumstances since there are users with the old name in their user record. To solve the problem, change the security profile name back to the original name.

Q I should have access to file areas, but no files show up. Why?

A In order to have files listed, you must make them available in two ways. First, the file areas must be available to the security profile in the "download areas" for each security profile. Secondly, the file areas must be available in the conference definition. Both must be set properly since file access is controlled by conference and security profile.

Q I've used a prior version of *WILDCAT!* and now it won't determine baud rate.

A You probably have your modem set for NUMERIC codes rather than VERBAL. Change it to verbal with the command AT V1, or by changing your modem switch (#2 on the USR HST).

Q Some display files just stop and won't start up again. What could cause this?

A You probably have upgraded from a prior version and still have some of the old style control codes in your display files. Particularly, the old ^S^P to force a -more- prompt is a problem. *WILDCAT!* is interpreting the ^S as a XOFF character and stopping the display until the caller sends a ^Q XON. Remove the old codes.

Q When I start *WILDCAT!* it seems like it tries to initialize the modem, but displays a message that "Modem carrier detected; must lower to continue...".

A Your modem setting for Carrier Detect (CD) is probably forced "ON". Change the appropriate dip switch to "NORMAL CD". Some modems without switches use the &C1 command to perform this function. This message means that *WILDCAT!* thinks a call is in progress! If you have no switches, add &C1 to your modem string. See *Appendix A - Modems* and the *wcMODEM* program documentation for more information.

Q Things work fine, but when callers try to say Goodbye, *WILDCAT!* just sends the menu to them again & doesn't hang up!

A Your modem has the DTR (Data Terminal Ready) line forced ON. Change the appropriate dip switch to "NORMAL DTR" Some modems without switches need to include the &D2 command in the startup string to perform this function. See *Appendix A - Modems* for more information.

Q *WILDCAT!* answers the phone and the caller gets connected but gets no response. *WILDCAT!* displays a message

"Determining Baud Rate...".

A You have apparently set *WILDCAT!* to determine baud by result codes, and it isn't getting codes that it can identify. First, check to be sure that you are sending verbal codes. Also check your modem to make sure the dip switch is also set for verbal. If you are sending verbal codes, then check the result code strings in MAKEWILD for each baud rate against your modem manual. Also make sure that your delay for waiting for a result code is set high enough. This delay can be tested using *wcMODEM*. Finally, check that your modem is sending EXTENDED odes, including the baud rate information needed. Extended codes are usually activated with the AT command Xn, where n is a number from 1 to about 7. Consult your modem manual, and test your setting with *wcMODEM*.

Q Why am I considered a New user when I first log on?

A See the section on the user database. Remember, until you have logged on the first time and used the F9 key to upgrade your security to that of sysop, *WILDCAT!* has never heard of you!

Q *WILDCAT!* seems to run OK, but I get an error 203 or 204 that talks about a heap/stack problem after it gets going.

A Both these numbers indicate a Heap/Stack Collision. Most of the time it simply means that you are attempting to run *WILDCAT!* without enough memory available. If you have any utilities in memory such as Sidekick, remove them one at a time until the program functions properly, or increase memory to 640 K.

Q After *WILDCAT!* gets started it gives me an error 4.

A - Error 4 is a Turbo Pascal indication that too many files are open at one time. The problem is almost always the omission of the statement "FILES=40" from the CONFIG.SYS file. See *System Requirements*.

Q When I try to use ALT-D to drop to DOS locally, I find that I don't have enough memory.

A Since ALT-D performs a "shell" to invoke another copy of the command processor (DOS), there needs to be enough memory available for the second copy of DOS. If sufficient memory is not found, the request is ignored. You may use MAKEWILD to specify that the system should *swap* to DISK or EMS whenever a shell is performed, which will allow ALT-D even with little memory remaining.

Q What is the difference between SYSTEM CRASH errors and NON-FATAL errors? What should I do about them?

A SYSTEM CRASH errors indicate that *WILDCAT!* was unable to recover and exited with an errorlevel of 1. If your CAT.BAT file was set up correctly, it was automatically restarted. These errors are listed in the ERROR.LOG and are accompanied by a description, location, date and time, and often with a suggestion for repair of a problem.

Non-Fatal errors indicate that a problem was encountered that was not serious enough to stop operation. These errors usually include a brief explanation of the error, often enough to enable the sysop to make a correction in the configuration. If you encounter repeated errors which are unexplained, call technical support.

Q My callers get a message that a door or netmail is always "in use by another node", and can't be accessed, even when no one else is connected. Why?

A This happens when a door that is set for single-user only operation is erroneously flagged in use in DOOR.DAT. This can happen if a node has a problem in a door and doesn't properly return to *WILDCAT!* to get reset. To repair it, run *wcREPAIR* and edit the DOOR info file, changing the "in use" flag to "N".

Q The total number of calls in not correct! How do I fix it?

A Take all nodes down and run *wcREPAIR*. Edit the Master file and change the number of calls to the correct value. Press [ESC] to exit and save the change.

Q When callers use [W]ho is on other nodes or I use CATEYE to look at the node activity the information is totally out of order and doesn't make sense. What's happened?

A Somehow your NODEINFO.DAT file has become damaged. Take all nodes down and try to edit the Node info file with *wcREPAIR*. If the information is too badly scrambled, simply exit *wcREPAIR* and delete the NODEINFO.DAT file. Bring up one node and let *WILDCAT!* recreate a fresh NODEINFO.DAT, then activate the additional nodes, if any.

Q Someone tries to log on and the system tells them they can't because someone is already logged on using that name.

A Take all nodes down, run *wcREPAIR* and check the NODEINFO.DAT file. Review all active nodes and find the one with the user's name marked as LOGGED IN in the status area, Move your cursor to the LOGGED IN field and press the spacebar until it reads DOWN.

Q What program should my callers and I use to read mail packets created by *Tomcat*?

A *Tomcat* will work with any QWK-compatible mail reader. You'll probably like Off-Line Xpress, though — the test drive version is always available for download from the MSI HQ BBS and may be freely distributed.

Q I get an error message sometimes which says "Unable to open .QWK after packing" Why?

A The usual cause for this message is not having your packer/unpacker utility in the path, or in the \WC30 directory where *Tomcat* can find it.

Another possible cause is running out of disk space on drive you have specified for your work directory. If you're using a Ramdisk, you may need to reduce the maximum number of messages per packet.

This message can also occur if *Tomcat* cannot run your packer for whatever reason—you may need to turn Swap to Disk or EMS on in Makewild to free up enough memory for *Tomcat* to execute the packer.

Q I allow unvalidated users to read mail, but they can't enter or reply to messages online. How can I prevent them from bypassing Wildcat! and entering messages through the *Tomcat* door?

A *Tomcat* reads the security profile definitions in MAKEWILD and generates dynamic menus in the same way Wildcat! does. A caller will not be shown (nor will he have access to) a menu function not permitted by his security level. In other words, if a caller is not allowed to leave messages online, he won't be allowed to upload replies to *Tomcat* either.

Q My mail reader allows me to change the "from" field in the message header. Doesn't this mean I or my users can put fake names in the "from" part of messages upload to *Tomcat*?

A No. *Tomcat* prevents callers other than those with SYSOP security level from uploading messages not "from" the person logged on, unless they have NETSYSOP security.

Q I would like to exchange messages with a BBS belonging to my branch office in another state. How can I do this?

A *Tomcat* fully supports 'net status' mail transfers. For full instructions on how to operate a network mail hub, please see Chapter 10 of this manual.

Q My conference message files keep growing. How can I limit the number of messages in a conference?

A Run MAKEWILD, go to Conference Definition, and select the conference to edit. In the "Maximum messages" section, enter a number which represents the maximum number of messages you want to keep in that message base. Exit from MAKEWILD, then run *wcREPAIR* or *wcRENUM* on that conference to purge old messages and shrink the database.

WILDCAT! will automatically delete the oldest messages in the conference to make space for new messages. The message numbers will continue to increment, and the size of the database may not be reduced, as deleted record space is reused for new messages, but the number of messages will remain constant.

Q I ran out of time as the sysop and can't log back on!

A Without *wcPRO* you have to logon as a new user and upgrade yourself to sysop, go to the sysop menu, to [U]ser database, and look your "real" account up, then [E]xtra info, and change number 19 (time left) to 999.

DO NOT CHANGE THE SYSTEM DATE TO ADVANCE TO THE NEXT DAY! *WILDCAT!* is extremely date sensitive! This can be avoided in the future by checking your security profile definition Daily Time Limit and Maximum Logon Time and making sure they are set to 999 for your Sysop security profile.

Appendix D - Tricks & Shortcuts

This section is devoted to sharing some techniques and operational features that may easily be overlooked by simply reading through the documentation. Some passages suggest how to implement specific features to get the most out of your BBS, while others review feature operation that may not be readily apparent.

Display Files

Don't overlook the advantage of maintaining only one set of display files rather than a separate color and non-color set. By simply creating a single set of display files ending in .BBS with the @ color codes you can save considerable maintenance time on your system while cutting the number of display files in half. The section on custom display files reviews the use of a plain text editor to create custom menus and other files.

When creating your menu file (or other fairly static files) you may want to take advantage of a program like *wcDRAW* to create a basic set. This utility is able to edit *WILDCAT!* display files in full color, saving them with the correct @xx@ color codes.

See Chapter 9 of this manual for full information on *wcDRAW*.

File Areas

File area addition can be a time consuming process. You first have to create the directory on disk and then use MAKEWILD to define the File area, the Conference access and the Security profile access (for both upload and download). You will find new file area creation in MAKEWILD easiest when all definition is done from the File Area Definition screen. *The trick is to make use of the* [F2] *key to display the Upload access, Download access and Conference access pick-lists on screen all at the same time.* All definition items are then available on one screen for assignment and verification.

If you need to add a group of files to the file database one of the easiest methods is to use the local upload function. Simply log on locally using [ALT] [L] or [F1] and use the file menu [U]pload command. Place the files in a temporary subdirectory or on a floppy and then upload the files using DOS wildcard characters such as A:*.*. You will be prompted for descriptions and file areas as the files are added to the database.

Many systems restrict uploads to one file area and then move them to the appropriate area after review. When moving these files it is important to have the file database date reflect the date the files were *moved* rather than the upload date. The easy way to accomplish this is to [M]atch/set on the upload file area and then use the [X]fer command rather than changing the file area for each file.

Conferences

When adding or creating conferences make sure you give access to all file areas that will be needed by *anyone* in the conference. Remember, file areas not associated with a conference cannot be listed by *anyone, regardless of security profile assignment.*

Events

A soft event to reset the quick statistics every morning at 00:01 is an easy way to track daily calls, messages and file transfers to your system. Since it is a soft event that is executed as close as possible to the time scheduled it can miss only one call's statistics.

Appendix E - Other MSI Products

WCPRO — The PRO! Series

This integrated utility program offers extended database processing and graphic analysis to the BBS sysop. It is used to manipulate and evaluate many areas of BBS operation.

The Statistical analyzer is used for tracking your system usage. Other sections devoted to users, files and messages are database manipulation utilities, used to create reports, lists, changes, and sweeping alterations to your data. The questionnaire section helps you get the most from the answers generated by questionnaires by performing percentage calculations, creating graphs, and exporting to database files. The PRO! Series also includes a TSR program, CATEYE, that can be used to monitor system activity in real-time when either DESQview or a LAN is used to run *WILDCAT!*.

The PRO! Series is available for $99. Call 1-800-999-9619 to place your order. The following is a review of the integrated features offered within the PRO! Series:

Statistics

Your system runs day after day and accumulates a wealth of information, but without this portion of WCPRO you are unable to use it to your advantage. The statistics feature quickly reads and analyzes the ACTIVITY.### files to get the information you need. It works by compiling key phrases, formatting the results in statistical form, and writing the results to a file of your choice. You can place the results in a bulletin, a downloadable text file, or even a file for screen display when the [S]tatistics command is requested. After running, WCPRO can optionally delete the ACTIVITY.### files and retain the calculated statistics and dates in a history file for future use. The history log feature allows for constant statistical updates in your display files without the need to allow the ACTIVITY.### files to grow to an unmanageable size. Multiple configuration files can be used to operate different configurations during different event schedules.

Why do I need an analyzer?—Running a host system is a lot of work. The maintenance and updating of users, responding to messages, and organizing files takes a lot of effort. After it's done, how do you know if you have met the needs of your users? Whether they are customers, a sales force, or a potpourri of callers from all over the world you need to know who is doing what, how often, and why. There is

no easy way to get that information using a manual effort. Sure, the ACTIVITY.### files tell you what is happening at any particular moment frozen in time, but it doesn't reflect the big picture.

What can it do for me?—The statistics option has so many uses it's hard to imagine operating a dial-in system without it. Suppose you use *WILDCAT!* as a connection base for your outside sales force. How do you determine which salesman has uploaded the most orders through the system? Have all 15 salesmen downloaded the latest list of sales leads? Is your newsletter article about the company's new sales incentive plan being reviewed? How about the new product technical support tips that you put in the bulletins, are they being read? Is the system *really* too busy for your employees to get connected, or are their complaints unfounded? WCPRO is a powerful business tool, but the hobbyist requires information as well. Which bulletins are of the most interest? Is 300 baud access really needed by your callers? When is the least busy time to call? When should you perform your maintenance events? Are the files in the Game area more popular than in Accounting? FIND OUT!

Statistics Features:

- Creates both .BBS and .TXT display files.
- Interactive or batch operation from within an event.
- Results sent to the printer or a file of your choice.
- Include or exclude various statistics screens.
- Graphic display in bar charts for download and upload protocol, baud rate used, type of logoff, number of calls per day, and number of calls per hour.
- User recap includes information on the average upload and download count, hot key setting, screen setting, age, help level, average time per call, transfer method, total number of calls, and more.
- Door recap includes number of times each door was entered, average time per use, and percentage of total door use.
- File recap displays the most popular files sent and received by transfer count, and includes the percentage or total transfers each represents.
- User upload and download recap indicates which callers are responsible for the most transfers.
- Questionnaire recap includes the number of times each was answered, with percentages.
- Bulletin recap includes the number of times each was answered, with percentages.

- Message recap includes the number of messages and average line count for each folder, as well as the number of messages deleted.

Message Management

The message management section of WCPRO is the answer to the drudgery of message review, deletion, printing, and movement from one conference to another.—It adds new flexibility to message management through a variety of features.

All program options are menu selectable and share a common, logical criteria selection screen with the user and file sections of WCPRO. You select which messages are affected by the activity as well as which other message information should be considered. You can specify an action on a specific group of messages, on a text match in the From, To, or Subject fields, whether Public or Private, as well as on the range of message numbers or age of the message.

Delete Option—When selecting messages for deletion you have the option of performing a "true delete" which removes the message completely or simply flagging it as deleted until a purge is performed. You may want to select messages for automatic deletion if they have been received and are private messages. Another regular configuration might wipe out all messages over 30 days old and not received, or 90 days old regardless if they were received or not.

List messages—Selected messages can be sent to screen, printer, or a file. This feature can be used for viewing messages prior to deletion or simply as a fast method of reading (and replying to) a group of messages.

Edit messages—The editor is fully interactive, and allows control over the content of any message. Select the desired message from a scrollable list, and then add or delete lines, change spelling errors, or expand on a previous message using standard word processing features like auto line-wrap, etc.

Message Management Features:

- The Criteria Selection Screen is common to all functions within the PRO! Series.
- Preview messages flagged for deletion using the List function.
- Export all or selected messages to a text file for download or [R]eading online.
- Full screen editor with both standard arrow and control key commands and WordStar keystroke support.
- Batch file operations may make use of multiple configurations which have been previously saved, allowing an event to perform more than one activity.

User Maintenance

One of the most neglected aspects of many BBS systems is maintenance of the User database. The reason is simple. Once a system becomes popular and accumulates more than 50 users, the prospect of reviewing each and every user entry becomes more than most sysops can bear. However unappealing this chore may appear, it does need to be done.

Individual items within the user record, such as default transfer protocol, may be used as a basis for listing, deletion, or security change. It's easy to maintain a registration BBS through regular deletion of names at the default security level, or to delete those who have not called within the last 90 days.

The Edit feature easily locates and allows modification of any user record. Changes are made in a full-screen editing mode and can be done even while the BBS is online.

User Maintenance Features:

- Export any desired fields in a variety of formats: standard "quote-comma-quote" delimited ASCII file, dBASE-compatible .DBF, fixed length ASCII, even mailing labels.
- Character searches in fields (such as name) are case insensitive and locate matches anywhere within the selected field.
- Common user interface with other portions of the PRO! Series.
- Batch file operation with multiple configuration files for event use.
- Full screen record editing.

File Maintenance

The file maintenance section of WCPRO follows the style of users and messages with regard to screen display, keystrokes, and Criteria Selection Screens. It also shares many of the functional features such as listing information to the screen, printer, or files.

The selection screen eases the chore of moving or deleting all files that have not been downloaded at least 5 times during the past 120 days, or perhaps listing the most popular downloads for your callers.

One of the most popular WCPRO features is file reports. It can quickly provide a list of all files located on your disk areas which are *not* included in the *WILDCAT!* database, as well as the database entries that have no actual file present on disk. It can automatically add missing entries or delete entries with missing files. It can even update the date and size entries for files which change on a regular basis.

Questionnaire Answer Analysis

This utility is used in conjunction with the questionnaire generation program MAKEQUES, and is designed to process ANSWERS rather than questions. It creates percentage statistics and graphs on all multiple choice questions, and can export answers to any database format commonly used.

It makes use of a History file similar to the one used by the statistics option. It stores the questionnaire template along with all statistical information compiled on multiple choice questions. This allows the sysop to analyze and print the answers covering a period of time and save them in a .HST file for use later. The answer file may then be erased and a new one started for the next evaluation period. When questionnaire analysis is run later it can make use of the .HST file after determining that the questionnaire itself has not changed. Graphs and statistical data will represent the *total* picture while your disk-based answer file remains at a manageable size.

The export feature allows the sysop to easily create mailing labels, form letters, mailing lists, or even text for database or word processing import.

wcFAX

wcFAX is a FAXback system for *WILDCAT! BBS* users, included with the *wcPRO* series utilities. It allows callers to enter a door, view a list of documents, mark those documents that interest them, and have those documents FAXed to the phone number they specify. Note that *wcFAX* does not receive FAXes from users, nor does it let a user download the documents rather than FAXing them.

The program consists of three components: the configuration utility FAXMAINT.EXE, the door program WCFAX.EXE from which callers select the documents they want to receive, and the fax server FAXSERVE.EXE which actually sends the documents.

wcFAX allows text and graphic files to be sent as faxes. Text files are ordinary ASCII files created by a text editor, or by a word processor which is capable of saving files in ASCII or DOS TEXT mode. Graphic files must be .PCX (Zsoft Publisher's Paintbrush format), in black and white or color. Color PCX files are converted to dithered black and white images automatically before being sent as faxes.

wcFAX offers many features of specific interest to *WILDCAT! BBS* system operators:

- Supports RIP terminal emulation, for point and click queuing of documents.

- Reads *WILDCAT!* configuration and user files.
- Supports regular serial ports and DigiBoard (with environment variable)
- Supports Class 1 and Class 2 FAX modems
- Cost of document can be deducted from user record account balance field.
- Users can mark and queue up FAX documents in the same way as marking and queuing up files for download.
- FAX server can run as an additional DESQview or network task, or as a Postcall event, or timed event.
- FAX server will retry up to 3 times to get the FAX through (up to five times if the line is busy), but aborts immediately if a VOICE answer is received.
- Completely configurable by security profile for FAXback to local, metro, regional, long distance and international calls.

CATEYE

CATEYE is a Terminate and Stay Resident (TSR) program for monitoring and altering *WILDCAT!* BBS activity. It is designed to be used when *WILDCAT!* is run in a LAN environment, but could be used with DESQview as well.

CATEYE has two main functions. First, it can be loaded as a 30K TSR that "sleeps" in the background on any LAN workstation with a *WILDCAT!* system on another network node. It is programmed to monitor the BBS activity and to report when selected activity takes place. The user can be working in any application desired and still receive notices of BBS activity. It does so through a pop-up display on the 25th screen line indicating what the BBS is doing. A typical notice on line 25 might read "Joe Martin paged the sysop on node 2." The length of time this information remains on screen is configurable, but usually set for several seconds. Other types of activity to be monitored may be message entry, door use, login and logout, and many more.

The second function allows the user to set up TSR *Hotkeys* to activate a pop-up window over whatever application is being run. The pop-up window is similar to the node information display in the sysop menu, and allows manipulation of almost all node flags, user time and other variables. Total control and observation of all nodes is possible from any LAN workstation.

The integrated PRO! Series is available for $99.

Auto-Update Plan

The Auto-Update Plan guarantees that you will stay up to date with all the *WILDCAT! minor* releases.

It is designed to provide **IMMEDIATE MINOR UPDATES** to *WILDCAT!* with no effort on your part. Never get behind!

As a subscriber to the Auto-Update Plan you will automatically receive every *minor* update to *WILDCAT!* and any PRO! Series Utilities that you have kept up to date for your copy of *WILDCAT!*. AUP subscribers are shipped their copies even before becoming available for mail ordering through Mustang Software.

What it Includes

Minor updates covered under this plan are those falling within a major version number. Updates numbered 2.10, 2.13, 2.15, 2.50 and 2.55 were all minor updates to the major release Version 2. By contrast, the release of Version 3 was *not* covered under the Auto-Update Plan since it was a major update. Subsequent releases of 3.1, 3.2, 3.5, etc. are covered under the plan, as long as the subscriber is current to the most recent major release.

Since subscribers to the plan receive minor updates throughout the year, voice technical support is also extended while on the plan.

Only $50 per year.

WILDCAT! IM

Eight lines, one computer . . . NO PROBLEM

The new "Intelligent Multiport" version of *WILDCAT!* is a special release designed for BBS installations requiring up to 8 incoming lines on a single PC, with or without LAN connectivity. Multiple PCs of 8 lines each can be connected in a LAN setting, up to the maximum of 250 nodes.

More Than Just 8 Lines

The eight-line per PC capabilities of *WILDCAT!* IM are just the beginning. In a LAN setting you can set up multiple 8-line systems combined with local connectivity for your network users. A 16 or even 32 line BBS now takes only a fraction of the space required previously, and adds the convenience of local LAN access.

WILDCAT! "IM" shares all the features and functionality of the rest of the *WILDCAT!* product line, including "Doors" and external program execution, and remote drop to DOS, while taking advantage of the most popular intelligent multi-port serial cards in the industry, the DigiChannel COM/8i, PC/8e or PC/8i.

System Requirements:

The *WILDCAT!* IM version is specifically designed to operate with intelligent serial port cards from Digi International, Inc. The DigiChannel COM/8i, PC/8e or PC/8i cards make use of on-board microprocessor support for communication activities.

An 80386/33 with 8MB of RAM is the minimum system required for operation. As the number of BBS lines and line speeds increase, faster processing may be needed. An 80486 system with 16MB of RAM will operate all eight lines at full throughput, even with the newest high-speed modems.

The multi-tasking chores on a WILDCAT IM installation are handled by DESQview 386 from Quarterdeck Office Systems.

WILDCAT! STUFF!!

How big a fan are you? Do you operate the BBS at work and go home and forget about computers completely, or did you really ***Catch the CAT?*** If you want to tell the world then get our 100% cotton Heavy T-shirt with the new *WILDCAT!* BBS logo on the back, just above our favorite battle cry:

"When you only have time to call the very best"

This handsome T is a full four color shirt; BBS in HUGE black letters shoulder-to-shoulder on the back with a bright yellow *WILDCAT!* planted in the middle. The background is our ocean blue-green, all on white cotton. The battle cry is printed below on the back. The front pocket area has the new MSI logo in purple and black. Call for sizes and stock information; $15.

For those looking to show their good taste in a more subtle manner there's the Mustang Software *WILDCAT!* BBS Golf Shirt. This is a heavy, 100% combed cotton 3-button white shirt that you can wear anywhere. Over the left breast a smaller version of the Mustang Software logo appears in blue and black just above the *WILDCAT!* BBS logo in black and yellow. Call for sizes and stock information; $30.

Other *WILDCAT!* promotional item may become available from time-to-time. We're considering coffee mugs, calendars, pens, license plate frames, and posters. Inquire about additional items when ordering.

wcMHS

The MHS Gateway to *WILDCAT!* Novell's Message Handling Service (MHS) can be interfaced to Wildcat using the wcMHS Gateway. Messages are automatically scanned and exported by wcMHS which runs as an event in *WILDCAT!* The E-Mail message is then routed by Novell's MHS to the intended recipient. Incoming messages are likewise scanned an imported by wcMHS. Echomail conferencing is another feature of wcMHS, allowing offices to share topical discussions. $299 per server, MHS v1.5 and Wildcat! 3.0 required. Call us at 800-999-9619 for more info on wcMHS.

QmodemPro

Professional Communications Software for your PC.

For more than eight years *Qmodem* has been the first choice of well over a quarter of a million pioneering communication enthusiasts worldwide. It was one of the industry's best kept secrets, available only to those who knew how to get a copy.

Now *QmodemPro* is available in a package designed for you — whether you're just discovering the online community, or you're a discriminating "power user" who demands a high performance, thoroughly professional package.

Off-Line Xpress

.QWK-compatible mail packet reader for *Tomcat*, QMail, Markmail and more. Reading mail from BBSs has never been easier. OLX can read packets generated by any .QWK compatible mail door used by most BBS, and generates reply packets in the .QWK format which can be uploaded back to the originating BBS. Included FREE with *Qmodem* 5.0, or available separately for only $40.

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Idle Screen keys

F1 or ALT S .... System operator local logon
F2 ..... Keyboard
F3 ..... Printer on/off toggle
F4 ..... Page hour override on/ off toggle
F5 ..... Page bell on/off toggle
F10 or ALT X .... Terminate *WILDCAT!*
ALT D ..... DOS/Application menu
ALT L ..... Local logon
ALT N ..... Node status
ALT T ..... Drive table
ALT R ..... Reset stats

Caller On-Line Keys

F1 or ALT S .... System operator local logon
F2 ..... Keyboard
F3 ..... Printer on/off toggle
F4 ..... Page hour override on/ off toggle
F5 ..... Page bell on/off toggl
F6 ..... Start or End local chat or page
F7 ..... Add time
F8 ..... Remove time
F9 ..... On-line user upgrade
F10 or ALT X .... Terminate *WILDCAT!*
ALT D ..... DOS menu
ALT L ..... Local next
ALT U ..... User record window
ALT V ..... VGA/EGA toggle
ALT W ..... Writing to screen toggle

On-line Message Keys

ALT 1 ..... Posts message ALT1.BBS to user; and then *logs user off*
ALT 2 ..... Posts message ALT2.BBS to user; and then *logs user off*
ALT 3 ..... Posts message ALT3.BBS to user and then *logs user off.*
ALT 4 ..... Posts message ALT4.BBS to user; and then *logs user off.*
ALT 5 ..... Posts message ALT5.BBS to user, user stays online.
ALT 6 ..... Posts message ALT6.BBS to user, user stays online.
ALT 7 ..... Posts message ALT7.BBS to user, user stays online.
ALT 8 ..... Posts message ALT8.BBS to user, user stays online.
ALT 9 ..... Posts message ALT9.BBS to user, user stays online.
ALT 0 (zero) ... Posts message ALT0.BBS to user, *logs the user off,* and locks the user name out of system for any future calls.
ALT - (minus) Logs user off immediately with no notice or explanation.

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Color Codes

The color codes system follows the format **@BF@**where **B is the background color** and **F is the foreground color.** Blinking is controlled via background choice.

B	B Attribute	F	F Attribute	Color
0	Normal	0	Normal	Black
1	Normal	1	Normal	Blue
2	Normal	2	Normal	Green
3	Normal	3	Normal	Cyan
4	Normal	4	Normal	Red
5	Normal	5	Normal	Magenta
6	Normal	6	Normal	Brown
7	Normal	7	Normal	White
8	Blinks FG	8	Hi Intensity	Black
9	Blinks FG	9	Hi Intensity	Blue
A	Blinks FG	A	Hi Intensity	Green
B	Blinks FG	B	Hi Intensity	Cyan
C	Blinks FG	C	Hi Intensity	Red
D	Blinks FG	D	Hi Intensity	Magenta
E	Blinks FG	E	Hi Intensity	Brown
F	Blinks FG	F	Hi Intensity	White

User Record Information

@FIRST@	First name
@USER@	Full name
@FROM@	From field
@ALIAS@	Alias name.
@COMPANY@	Company
@ADDR1@	Address 1.
@ADDR2@	Address 2.
@CITY@	City
@STATE@	State
@ZIP@	Zip code.
@PHONE@	Phone number
@DATA@	Data phone
@ACCBAL@	Account balance
@NETBAL@	Netmail balance
@MEMO@	Memo date
@MEMO1@	Comment 1
@MEMO2@	Comment 2
@SINCE@	Date of first call
@BDATE@	Birth date
@CPU@	Computer type
@CALLS@	Total number of logons
@PROTOCOL@	Default transfer protocol
@LASTNEW@	Last [N]ew files search date
@LASTON@	Date of last call
@SEC@	Security profile
@MLEVEL@	Menu display set number
@UPK@	Total upload kilobytes
@DOWNK@	Total download kilobytes
@UPS@	Total uploads
@DOWNS@	Total downloads
@MSGSLEFT@	Total messages posted
@EXDATE@	Expiration date

Special Display File codes

@CLS@	Clears the screen
@BELL@	Beeps the speaker
@PAUSE@	Displays the - Pause - prompt
@NOSTOP@	Turns off the user's ability to stop display of screen.
@STOP@	Stops the display again if a previous @NOSTOP@ was issued.
@NOPAUSE@	Eliminates the - Pause - prompt line in display files.
@IFSEC=PROFILE@	Sends following text ONLY if the security profile is equal to the profile name following the equal sign.
@ELSE@	Sends following text to all other security profiles.
@ENDIF@	Sends following text to all security profiles.

System Information

@TIME@	Current system time
@DATE@	Current system date
@BBS@	Name of the BBS in MAKEWILD
@TFILE@	Total number of files
@TMSG@	Total messages
@TCALLS@	Totals calls
@TUSER@	Total number of users
@LASTCALL@	Time of last call to the node
@PREVON@	Name of last caller to the node
@NODE###@	Node ID status
@SYSOP@	Sysop's name from MAKEWILD
@VER@	*WILDCAT!* version number
@NODE@	Node ID number
@CONF@	Current conference name
@CONFOP@	Conference sysop

User's Current Call Information

@TIMEON@	Time on system this call
@LEFT@	Time remaining this call
@BAUD@	Current baud rate
@DAYBYTES@	Daily download K
@DLKLIMIT@	Maximum daily download K limit
@MAXRATIO@	Maximum up/download ratio
@MAXDL@	Maximum downloads per day
@MAXDK@	Maximum download K per day
@KBLEFT@	Kilobytes left
@EXPDAYS@	Days until expiration date

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